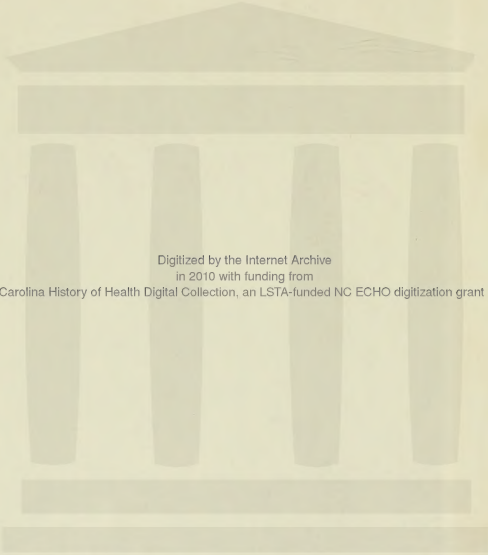


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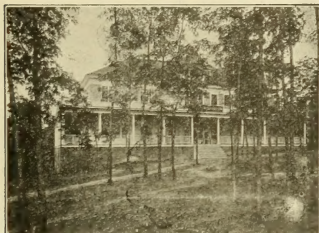
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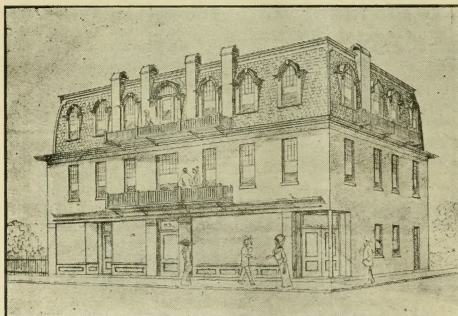
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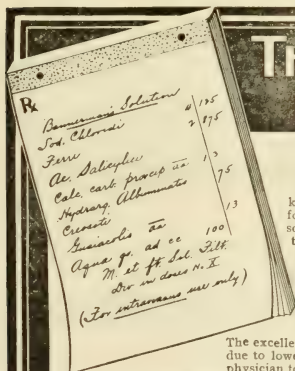
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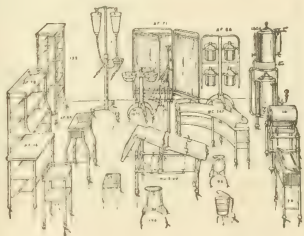
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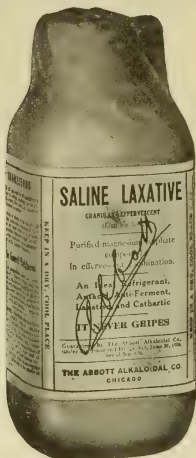
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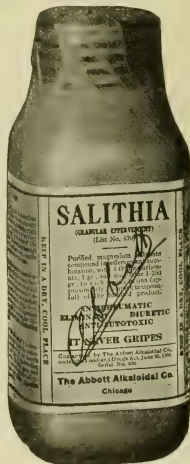
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FORMULA—Huxham's Tinct. Mod., nux Vom., Piperin, Zingiber,
Camphor, Gentian, Matricaria, Phosphorus C. P., Aromatics.

INDICATIONS—General Debility, Nervous Prostration, Paralysis, Incipient Softening of the Brain, Vertigo, Weakness, and weakness from Debilitating Losses, Pain in the Back, Weakness of the Limbs, Jaundice, Loss of Appetite, Insomnia Dyspepsia and Constipation, Sick and Nervous Headache, and during the Menopause.

DOSE—5 to 10 drops, in two tablespoonfuls of water, before each meal.

We ask a trial of the Iowna Tonic at our expense, as we guarantee it to be a marked advance upon our Freligh's Tonic, doing all the Freligh's Tonic will do and more.

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A teaspoonful contains	{ Cystogen	gr. V.
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DOSE: One to three teaspoonfuls in a glass of water t. i. d.

is suggested as specially convenient since a laxative is usually indicated and seldom inadvisable in these cases.

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The Charlotte Medical Journal

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CHARLOTTE, N. C., JULY, 1913.

No. 1.

President's Address.

By J. P. Munroe, M.D., Charlotte, N. C.

Fellow Members of the Medical Society of the State of North Carolina, Ladies and Gentlemen:

The constitution of the Medical Society of the State of North Carolina adopted ten years ago states that "The purpose of the society shall be to federate and bring into one compact organization the entire medical profession of the State of North Carolina—with a view to the extension of medical knowledge and to the advancement of medical science; to the elevation of the standard of medical education and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

These are noble purposes, and it is entirely proper that we should take brief account of stock, that we should occasionally consider in what ways we have accomplished the purposes herein outlined, and to what extent we have attained the goals sought for.

It is not the purpose of the speaker to enter into a full discussion of the merits or demerits of the new plan of organization adopted at Hot Springs ten years ago. He wishes rather to point out some of the advantages that have accrued, some of the results that have been attained, and, if possible, to inspire this organization and its component members with more zeal for future work, higher ambitions for scientific achievements and nobler aspirations for professional unity.

One very decided improvement of the present plan of organization over the old was the division of the State into Councillor Districts, and the election of a councillor for each district who is an officer of the society, and it is no unimportant feature of this plan that the councillor is elected for a term of three years rather than one year, as is the case with your president. By reason of this, the councillor is enabled to familiarize himself with the needs of the

profession throughout his district, to visit and advise with the various county societies, to help organize such societies where none exist, and to bring these together into the formation of district societies.

My observation has been that your councillors have been a very important factor in stimulating the growth and efficiency of the county society. Moreover, the district societies, wherever formed, have proven of great educational value, and have to a certain extent taken the place of post-graduate schools in their respective localities.

I wish especially to emphasize the good work that has been done in several counties, and more particularly in the district meetings in the way of clinical demonstrations.

This kind of work should be encouraged, and I would like to urge every county society and every district to promote as far as possible clinical work in their meetings. There is scarcely a district in the State that does not afford facilities, some of them unusual facilities, with good operating rooms for surgical demonstrations, and commodious halls for the presentation of medical, clinical and interesting pathological specimens.

It is a matter of history that the first impetus given to American physicians and surgeons in the study and treatment of myxoedema originated in the clinical demonstration given by Dr. Ord and others in a clinical Congress in London in 1881.

Another important feature that has resulted from the re organization of the society referred to is that at these meetings more time is devoted to the presentation and discussion of scientific matters, and that those preparing papers and reports bearing on their work and investigations have a fuller opportunity of presenting them to their professional brethren without a fear of having them crowded out by overdue attention to business matters or semi-political considerations brought before the society.

Indeed the interest in scientific matters became so great that a rather new and unexpected status of affairs has recently arisen in that it is sometimes difficult to find sufficient time for the medical and surgical papers to be heard during the sessions of our society. It is not an easy matter for those who arrange a program to fit exactly the hours during which we are scheduled to convene. Sometimes a number of papers are placed upon the program and the authors fail to appear, thus leaving a vacancy

for that particular time. Then again, papers of unusual interest are presented which provoke an unexpected amount of discussion, and then the time appears too short for the program as arranged. Then too, the very excellent rule limiting papers and discussions is occasionally abrogated by the will of the society; so again we have an encroachment upon the time of some one placed upon the schedule. Those who arranged your schedule and your presiding officers have endeavored to make all proper allowances for these things, and they appreciate and desire the fullest discussions upon all proper subjects brought before this society, consistent with the rights and privileges of each and every member, but we sincerely hope that the program as arranged for this season will be carried through as written, as nearly as possible. Your president also urgently requests that every member of the society will stay until the program is completed.

Growth of the Society.

I am sorry not to be able to state the exact growth of the society for the past 10 years. For the six years of which we have a correct record, the number of members has increased nearly 50%, being 769 in 1906 and 1100 this morning at 10:30 o'clock with two counties, Davie and Richmond, still to be heard from.

There are 1700 active practitioners in the State. This makes nearly 600 who do not belong to the society. Not a bad showing.

Suggested Improvements.

It has been stated, and perhaps truthfully, that we do not use systematic and business-like methods in conducting the affairs of this society. There is no special time for remitting dues and paying assessments and our secretary tells me it is impossible to know accurately the financial standing of the society or the number of its members at any particular time. I desire, therefore, to join in the request that you adopt a suggestion made by the Conference of Society Secretaries recently held in Chicago, viz.: first, that the calendar year and the fiscal year coincide; second, that dues in the county societies be collected on January 1st and remitted by the county secretary to the State society not later than March 24th.

One suggestion made by our secretary deserves your most earnest consideration, viz.: the adoption by this society of a plan of "Medical Defense," which provides an attorney to fight malicious prosecutions and to relieve the county societies of the responsibility of prosecuting quacks and other violators of the State laws. There is an increasing tendency throughout the State

for people upon the merest pretence to seek damages from the doctor who has been faithful, day in and day out, often receiving little or nothing for his services. Indeed, if a physician happens to be comfortably fixed in this world's goods, he is in great danger of prosecution at the hands of designing parties whenever he takes upon himself the responsibility of operating or of administering any treatment, the outcome of which carries any uncertainty with it. Our profession should arise as one man and we should stand shoulder to shoulder in resisting this growing evil.

Third: I understand that there is no complete collection of the volumes of the transactions of this Society. I hope the members will give every possible aid and encouragement to our secretary in collecting the missing volumes and appoint a committee to assist him in this work, if necessary. I am quite sure that the University library and other public libraries throughout the State will be glad to furnish room for this historical matter.

The speaker has had an opportunity of reading the reports of your secretaries, and he also had the privilege of attending the meeting of the Health Officers Association held here yesterday.

If he can skim a little cream from the one and gather some appetizing crumbs from the other, he may thereby add to the nutritive value of his offering to you this morning.

Legislation by the General Assembly of 1913.

We are fortunate in having in the Governor's Chair a Chief Executive who takes an intelligent interest in health matters and is in thorough sympathy with advanced measures looking towards modern sanitation and the betterment of all classes of our people. The last legislature lent a kindly ear to the suggestions of our Committee on Public Policy and Legislation.

A law was passed requiring preliminary education for the study of medicine equivalent to the entrance requirements of our State University. More than one effort had been made previous to this to secure such an act, and your committee is to be commended on their success this time.

The most far-reaching and in some respects the most important piece of medical legislation ever enacted in our State was that of the recent General Assembly, requiring the registration of all births and deaths occurring in the State of North Carolina. The law adopted is what is known as "The Model Vital Statistics Law." It is not my purpose to go into a detailed discussion of what is to be accomplished under this law, but I am sure every member of this society

will appreciate its importance, especially after you have heard the report of the Secretary of the Board of Health, explaining its various features.

What I wish particularly to say is that no law, however valuable, can be enforced unless the people are in sympathy with it.

The enforcement of this law and the benefit to be derived from it will be largely in the hands of the medical profession; unless you co operate and give your active support to carrying out the provisions of this bill, it will fail to accomplish its purpose. At present only a certain number of cities and towns have even a registeted record of deaths with the causes. Our State Board of Health, under the leadership of its very efficient secretary and the assistant secretaries, and the various health officers and local health authorities, deserves great credit for the diminution of deaths from preventable causes.

Typhoid Fever.

But a few years ago typhoid fever was a veritable scourge in many of the towns, villages and even country districts of the State.

The sinking of deep wells, the purification of the water supply, the more rigid attention to the disposal of human excrement, the fight against flies and their breeding places, and the use of anti-typhoid vaccine, whenever feasible, resulted in bringing down the mortality from typhoid fever very materially, yet much remains to be done, and it is our duty to impress upon the public the fact that modern methods for the prevention of this disease are certain and will yield the desired results in every case where they are properly applied.

State Laboratory Investigations.

I ask you to pay special attention to the report that will be read by Dr. C. A. Shore of the State Laboratory. His report is not long but contains some very valuable information and timely suggestions.

Note what he has to say about *wells* and drinking water in the production of typhoid and the all too prevalent custom still prevailing as to the use of impure water.

Note also what he says about the increase of hydrophobia and the remedy he suggests.

I am glad to say that Dr. Shore tells me the State Laboratory will soon be prepared to furnish anti-typhoid vaccine at a cost which will be a very small charge.

Some Other Infectious Diseases.

I wish to refer briefly to some comparative statements taken from the last census of the United States with reference to two or three other diseases.

Measles.

I am decidedly of the opinion that we do not attach enough importance to this formidable disease. As a cause of death throughout the United States it is not very high, being only 10 to 100,000 population in the registration districts for 1911, but the record for North Carolina in the registration towns is 15.5; that is more higher than 50 per cent. higher than for the general country, only Kentucky and Missouri showing a higher death rate. During the present year measles has been exceedingly prevalent and in some districts a veritable scourge, and I have no doubt that when the record is written, 1913 will show a larger total of deaths than any previous year.

Whooping Cough.

What I have said of measles applies with equal force to whooping cough, especially with reference to infant mortality. Here again, North Carolina mortality as recorded is comparatively high, in fact four times as high as the general registration area, the average for the country being 11 3-10 against 46 2 10 for North Carolina.

Having no effective remedy or protective inoculation against measles or whooping cough we can only rely upon our present imperfect knowledge and uncertain methods.

In the meantime in handling cases of these diseases we should be careful to enforce sanitary habits, personal cleanliness, a rational quarantine, efficient isolation and intelligent disinfection.

Pellagra.

In the mortality from this disease the census for 1911 places North Carolina greatly in excess of any other registration area, but this is of little comparative significance when we consider that the States in which it is most prevalent have no registration areas. Still the prevalence of this disease and its great mortality call for our most serious consideration.

We are to be congratulated that one of our fellow members, Congressman Dr. John Faison, in response to the unanimous request of this society, by resolution passed in Hendersonville a year ago, has secured from Congress an appropriation of \$45,000 for the study of this disease. Our thanks are due Dr. Faison and other Congressmen in our State for their active work in this matter.

Diarrhea and Enteritis (Under Two Years).

The most important preventable cause of infantile mortality is represented in the group of affections summarized under the title of "Diarrhea and Enteritis."

Here again in the last census North Carolina stands at the head of the list in the number of deaths from this cause.

The death rate in the registration area was 77.4 per 100,000, while that of North Carolina was 150.1, or nearly double that of the average area.

These are conditions that should be handled largely by local health authorities and the family physician. The most important single factor that is under the control of health authorities is the matter of pure milk supply.

Pure Milk Supply.

The subject of pure milk supply is one that few of our municipalities have taken hold of in earnest. Asheville has accomplished more in this line than any other city in the State, so far as my information goes. Recently it has made arrangements by which the city secures "certified" milk for those customers who are willing to pay the price which is 60c. per gallon.

This certified milk must contain a bacterial count of 10,000 or less to the c.c.

Very shrewdly the health authorities do not impose a maximum count at which they refuse the milk. In order to induce the dairyman to furnish the best possible milk, a wholesale depot has been established which buys milk from the dairyman and pays for it according to the bacterial count. The plan is this: The regular price for milk was 18c. per gallon by wholesale. Now the depot man says to the dealers: We will pay you 20c. per gallon if your milk shows a count of not more than 20,000 per c.c. From 20,000 to 40,000 we will give you 19c.; from 40,000 to 60,000, 18c.; from 60,000 to 90,000 we will penalize you 1c. and give you only 17c. per gallon. Counts above 90,000 we will not buy at all.

We should impress it upon municipal authorities, the general public and our health officers everywhere that milk of acceptable quality cannot be secured unless the proper attention is given to every detail, including the character of the cows furnishing it, regular inspection of the same, and proper care of the cows, the proper cleansing of the cows before milking, proper attention to the vessels, to the character and to the cleanliness of the milkers. Follow this with proper care of the milk, so as to prevent contamination by flies, impure air, etc.

There is a mistaken idea that milk can be run through a machine that will separate the trash, dirt and other debris, and then through a pasteurizer to destroy pathogenic bacteria, and that thus a pure and acceptable milk can be produced. Your president had the privilege somewhat rec-

ently of passing through a milk-handling establishment that seemed to be modern and up to date in every particular, so far as the methods inside of the establishment were concerned. A mechanical separator removed enough of the material to make one feel that the milk was pure and wholesome without any further treatment; but to make assurance doubly sure, it was then put into a pasteurizer, where with the heat nicely regulated and the time properly spaced according to scientific rules, it was presumed that a wholesome milk would be brought forth. Furthermore, by careful screening, all flies were excluded from the establishment, and an excellent mechanical device transferred the milk into bottles, without allowing it to come into contact with the air. These were hermetically sealed and placed in a refrigerator, ready for distribution. The speaker drank some of this milk, and he would naturally feel a certain degree of safety in doing so. He also saw with some satisfaction a "Babies Milk" prepared in the same establishment and with elaborate care, but lo! when samples of these two kinds of milk were passed into the testing laboratory, what was the result? It was, that in the "Babies Milk" there were 440,000 bacteria to one c.c.; in the adults milk 1,600,000 to the c.c. In other words, every time the innocent babe swallowed a teaspoonful of his specially prepared milk, he imbibed with it 1,760,000 bacteria, and in the ordinary glassful swallowed by your president, he was called upon to digest 6,400,000 bacteria.

This milk, gentlemen, was collected from a large number of dairies with no supervision; it was treated scientifically in the milk establishment, but in spite of this care and treatment it remained a milk unfit for use.

Municipal Regulation.

I have called attention especially to milk supply and its inspection, and would like to dwell on other phases of the subject, especially meat, but what applies to one applies to all. I do not expect nor do I advise any municipality to adopt the best methods all at once.

To attain this, the public must be educated, the physicians must be in sympathy and lend their support to the movement.

This is well illuminated by the comparative history of the movement in certain cities of our State in connection with the work in Asheville.

I heard on yesterday, at the health meeting here, an interesting paper and discussion on the lack of harmony and perfect success of health regulations in some of our Eastern Carolina cities. I am not sponsor

for the good people of these towns nor for their health officers, but I think it quite probable that there an effort has been made to progress too rapidly.

Here again I may be permitted to call attention to the Asheville method. Their officers worked gradually, feeling their way, educating the public, advertising their plans with the result of work accomplished* at each step, and above all taking care to have the medical society behind them and making no important step without this backing. In this way Asheville has outstripped every other city of the State and her people and physicians are not only harmonious but actually proud of their record. If I may use a homely illustration: When as a boy in Eastern North Carolina, I attempted to jump across the murky streams found in this region I frequently fell short of the mark and got stuck in the mud where water slowly flowed around me and the sticky mud held me. Is it not probable that some of our ambitious sanitarians in the eastern towns attempted to make their first leap too far and instead of clearing the stream got stuck in the mud and have been floundering there since. The agile mountaineer, however, was not so ambitious. He stepped from stone to stone in his beloved mountain stream, pursuing perhaps a somewhat tortuous route, but always advancing, sometimes getting his feet wet, and maybe resting awhile if the water seemed too deep, but as the mountain torrents subsided, as they often do rapidly, quickly he pressed forward again with his eye on the solid rock of the healthy shore which he has now practically reached.

Medical Inspection of Schools.

With the exception of Atlanta and perhaps a few other places, the people of the South, and of North Carolina in particular, are dependent upon Boston, Chicago, New York, and a few other cities for accurate information about medical inspection of schools.

In my own city of Charlotte, representatives of the county medical society volunteered to do a certain amount of medical inspection, but the work was not put upon a permanent basis for the lack of money to pay for it.

No effective permanent system can be established without salaried inspectors and considerable expenditure for clerical work.

Our State is fortunate in the fact that the U. S. Government has authorized Dr. C. M. Stiles, with his five assistants and a full clerical force, to do some work in this line in North Carolina, in the city of Wilmington. By the arrangement Dr. Stiles has made with the city of Wilmington and

county authorities, the Marine Hospital and all its facilities and four thousand school children are turned over to him.

By correlating the facilities thus afforded, making a most thorough inspection of the school children in a manner acceptable to the parents, judicious and modern in methods, Dr. Stiles will without doubt make a contribution of incalculable benefit in advancing sanitation in our State.

North Carolina School for the Feeble-minded.

Another important movement in this State was the establishment of the North Carolina School for the Feeble-minded, which is located in Kinston.

I believe this society ought to go on record as favoring the establishment of this important institution. It is really the missing link between the common schools and our hospitals for the epileptic and insane.

The legislature was not as generous to this institution as I think it should have been.

I ask each and every one of you to give your hearty support to this much needed institution.

State Hospitals for the Insane.

These institutions are doing a noble work and are receiving appropriations from the State for their support, running well up into the thousands of dollars. Yet there is a constant cry for more room, and I am told that during the past year about half of those seeking admission at the largest one of these hospitals had to be turned away for lack of accommodations. My worthy predecessor commented upon the fact that little or no research was being done in these institutions. He might have added that by reason of limited facilities curative measures are not brought to the highest possible state of efficiency. This is not intended to reflect upon the man in charge of these institutions, but rather to emphasize the fact that their whole time and the State's resources are exhausted in providing a comfortable home or house of refuge for these unfortunates and the fact remains that we have not been able to keep up with the demands even in this respect.

I most heartily commend the movement now on foot to erect at the State Hospital in Morganton a building to be known as the "Reception Building," the idea being that this department shall be used for the purpose of receiving new patients—acute cases—classifying them and retaining for proper treatment those that appear to be curable in a reasonable space of time; by this means it will be possible for those in authority to get better results in the application of modern methods of treatment.

The old idea of the incurability of mental diseases is passing away, and we can offer to many the hopeful outlook of being restored to health and happiness.

With the limited statistics available in our State, it is impossible to give figures bearing upon the subject, but to the casual observer it would appear that insanity is on the increase in our midst. Whether this be so or not, it is a subject that deserves our best thought and research, to the end that the causes may be found and eliminated as far as possible.

I doubt very much if this research work can be done solely by those in charge of our State Hospitals. I am inclined to think that the State should make a special appropriation and appoint a special commission to co operate with the authorities of these institutions and with all other persons who may give any assistance, for the purpose of searching out the causes of insanity and promoting such educational measures as will help to eliminate those causes.

We spend about a half million dollars a year in furnishing food and shelter and clothing to these unfortunate people; can we not well spend a few thousand dollars also in an effort to limit their number.

Eugenics.

A great deal is being said now-a-days upon the subject of eugenics, and at the last meeting of this society an unusual degree of enthusiasm was aroused on the subject by the most excellent paper of our distinguished member and present first vice-president, Dr. Harris, of Henderson. The work along this line is a three-fold one: first, investigation, so as to ascertain the real facts bearing upon the subject; second, educational, the bringing of those facts, when ascertained, properly before the profession and the public at large, to the end that proper measures may be taken to remedy existing evils; third, legislative. At this stage of the question, this is the least important, except so far as legislation may be necessary to furnish the sinews of war for making the proper investigations and also to confer adequate powers and facilities upon those making these investigations. The time for restrictive legislation, such as has been adopted in a few States, I believe has not come for us, and certainly should be delayed until it can be undertaken in the fullest possible light.

I have referred briefly, fellow-members, to some of the things that pertain to the interests of this society and pointed out a few things that I believe call for our special attention at this time, and have spoken also of some of the achievements that have been accomplished by our profession in recent

years. In view of all these things and considering the earnest, hopeful spirit of those who are leading our profession and educating the public in all health matters, we may confidently look toward the future and hope for even better things, but, as already intimated, when we consider the past and compare it with the present we must admit that we are living in an age of great privileges, great opportunities, and are enjoying blessings that were scarcely dreamed of a quarter century ago.

Pituitrin in Obstetrical Practice.*

By Kivy Pearlstine, M.D., Charleston, S. C.

A safe and effective agent that will assist in prompting the normal functions of confinement is an essential part of the armamentarium of the general practitioner.

While the average patient will successfully pass through the different stages of labor, giving birth to a healthy, normal child, the physician frequently meets with conditions, over which he or the patient has no control, which delay the progress of labor, thereby unnecessarily consuming the physician's valuable time and submitting the patient to much suffering and unwarranted delay in labor, all of which is a hazard to both the mother and child.

There are unquestionably certain cases that require application of forceps, and a very few that present indications for surgical interference, but the vast majority need but a moderate stimulation of the normal functions to bring about an early termination. The list of agents intended for this purpose have been few and more or less unreliable in action, but recent experience with pituitrin promises the ideal as an oxytocic.

Pituitrin is an extract of the posterior portion of the pituitary gland in aqueous solution and may be administered by hypodermatic injection. While the physiology of this gland is, as yet, more or less in question, its clinical application has left but little or no doubt as to its action in certain complications of labor.

Early clinical investigations were made by Frankl-Hochwart and Frolich of Vienna, Bondy of Breslau, Voight of Berlin, Hirsch of Strassburg and many others. Pituitrin seems to have a direct stimulating effect upon the muscular fibers of the gravid uterus, and its employment is usually indicated while labor is in progress, especially where there is uterine inertia, either in the primipara or multipara, also in placenta praevia after rupture of membrane, or where

*Read at meeting of Medico-Chirurgical Society, Charleston, S. C., May 23, 1913.

the fetus is carried beyond the normal term. After labor has been completed, it will be found of advantage in controlling post-partum hemorrhages, and some authorities have recommended the injection before labor as a prophylactic to post-partum hemorrhage.

Animal experimentations have shown some interesting facts regarding the peculiar action of pituitrin upon the female organs. A marked contraction of the uterus was noted in the cat following the intravenous injection of 4 to 10 of a gramme of dry ox-pituitrin. In a series of experiments on animals, gravid and lactating rabbits, it was found that the uterus, after small doses of pituitary extract (3-10 to 5-10 c.c.) was subjected to powerful and long enduring contraction.

It has further been observed that a small amount of the extract intravenously injected into dogs increases the sensitiveness of the bladder nerves, and suggests that the extract should prove of clinical value in atonic conditions of the bladder as well as in those of the uterus.

Some interesting statistics may be observed in the early clinical use of pituitrin. One authority claims marked effect in the first stage and that it was given with excellent results in 34 cases during the expulsion period. In 15 cases the birth followed during the first quarter of an hour after the injection; 13 during the next hour and 6 during the next two hours. On the other hand, the extract failed in some cases of abnormal resistance of the soft parts to bony pelvis. It also failed in 8 cases of primary uterine inertia. In 5 cases of rigidity of the soft parts there was little or no effect in 2 cases. In 9 cases of placenta praevia the results were strikingly good in 6, but in 2 cases pain stopped for a short time and in a third the extract had no apparent effect.

Voigt (University of Obstetrical Clinic, Berlin) employed pituitrin in 75 cases. In 60 of these (80 per cent.) the results were very good, while in 11 the pains produced were only weak and temporary, and in 4 the administration of the product appeared to be detrimental to the course of labor. Among the 60 cases, all stages of first and second period of labor were encountered. The partial failure of the extract in 11 cases was thought to be partly due to the use of too small doses in the earlier cases.

Hahl (University of Helsingfors) administered subcutaneous injections to 34 patients and the course of labor in each case, before and after injection, carefully recorded. Two Caesarean sections were performed with the aid of pituitrin which, in one case, was injected directly into the wall

of the uterus. In 22 cases the drug increased the pains and hastened labor to a marked degree. In 6 others it had a similar, though somewhat less powerful, action, and in 2 it had no effect whatever. The characteristic action of the drug was a shortening of the interval between contractions and marked increase of intra-uterine pressure.

Hamm, Strassburg, reported 25 cases, some of which were primary and some secondary uterine inertia. In only one case did it fail entirely. He found the drug a valuable adjunct in Caesarean section and in miscarriage, but valueless in the production of premature birth.

There is apparently no accumulative or toxic effect following the administration of this agent, and it can be used without fear even though the condition does not absolutely demand medical interference. It is a well known fact that functional atony of the uterine muscular fibers, with the pelvis narrowed to a moderate degree, threatened eclampsia, weak, feeble heart action, intra-uterine asphyxia, all become more or less alarming to the physician when the patient is showing marked disinclination to advance the progress of normal labor. It is just this class of cases that give considerable worry to the physician and surrounds the case with a greater or less degree of danger, all of which may be quickly eliminated in the average case by the administration of a few subcutaneous doses of pituitrin.

So far as observations have been made, pituitrin will not hasten premature labor nor produce abortion. The only recognized contra-indication for this treatment is,—nephritis, extremely contracted pelvis, myocarditis, arteriosclerosis, threatened rupture of the uterus.

The following cases from my own practice will illustrate some of the marked advantages in the administration of pituitrin in correctly indicated conditions:

Case 1.—Private practice. Name: Mrs. A.; age 35.; F.; married; occupation, domestic. History: (Multipara). Patient in labor 32 hours, with slow but constant pain. Examination revealed no mechanical obstruction, presentation normal. As no progress was being made, decided to use instruments, but family and patient objected, so patient was sent to hospital. Four hours afterwards decided to use pituitrin, and 1 Cc. administered. Was called hurriedly to another case outside and within 50 minutes after departure patient gave birth to fine child. Delivered by hospital attendants. No after effects, patient recovered.

Case 2.—Name: Mrs. R.; age 30; F.;

married; occupation, domestic. History: (Primipara). Was called in at 8:00 a. m. Patient had been in labor 6 hours. L. O. A. presentation, uterine inertia; 11:45 a. m. pains practically ceased, head on perineum; 12:15 administered 1 c.c. pituitrin, pains began more severe immediately, and within 20 minutes patient gave birth to healthy 8 lb. male child. Patient made normal recovery.

Case 2.—Name: Mrs. A.; age 33; F.; married; occupation, domestic. History: (Multipara). Patient had been in labor 12 hours, head almost down on perineum, but pains very slow—normal presentation. After waiting reasonable length of time, decided to give pituitrin, and 1 c.c. was administered, with a prompt increase in pains, but within one hour ceased entirely. Returned to patient in 12 hours and found pains had ceased. Gave 1 c.c. again and within 15 minutes patient delivered 7 lb. girl. Recovery uneventful.

Case 4.—Name: Mrs. M.; age 24; F.; married; occupation, domestic. History: (Multipara). I was called early in the case and wanted to experiment with pituitrin. I firmly believe that without pituitrin in this case I would, ordinarily, have had to remain all night, but one-half hour after arriving made examination; found cervix dilated; head in normal position; pains every 20 minutes. Gave 1 c.c. pituitrin (hypo) and soon I noticed infrequent and severe pains. Within one hour delivered patient without laceration. Patient made uneventful recovery. Delighted with action of pituitrin as it gave me good night's rest and the patient thanked me for giving her the injection.

Case 5.—Mrs. K.; age 29; F.; married; occupation, domestic. History: (Multipara). Pregnancy $6\frac{1}{2}$ months. Membranes ruptured before my arrival. Patient informed me that she had aborted one year previous at 7th month. On examination found cervix well dilated. After waiting reasonable length of time, and noticing pains were slow and patient so very uncomfortable, contractions not sufficient to cause expulsive movement, 1 c.c. pituitrin was administered. Normal contractions at once set in and labor proceeded favorably. Uneventful recovery.

Case 6.—Name: Mrs. P.; age 24; F.; married; occupation, domestic. History: (Multipara). About two years previous I delivered patient after waiting two days after pains had set in. Naturally I did not look for a more rapid termination in this instance, so after examination, finding cervix dilated, head well down, and pains irregular with no contracting force, I decided pituitrin was indicated and adminis-

tered 1 c.c. subcutaneously. Within 90 minutes child was born. Patient made uneventful recovery.

Case 7.—Name: Mrs. W.; age 23; F.; married; occupation, domestic. History: After waiting reasonable length of time and finding patient making no progress, decided on 1 c.c. pituitrin, with no results. Returned in 6 hours to patient, made another examination, but no progress in case. Gave another c.c. of pituitrin, with no decided effect. Then I began to question whether I had made the diagnosis of the proper presentation. Another thorough digital examination revealed persistent posterior position and I immediately applied forceps.

In this case I want to bring out the fact that the two injections had no harmful effects, only increasing the severity of the pains for a certain length of time. Mother and child made uneventful recovery.

The above seven cases are only a part of my experience with pituitrin, and I can say with pleasure that it has proven a charming adjunct to my armamentarium, and I always carry a few ampoules in my pocket for emergency cases.

Hemorrhages, lacerations and retention of urine are not associated with the proper administration of pituitrin.

Diseases Due to Faulty Nutrition, with Especial Reference to Diarrhea.*

By Guy S. Kirby, M.D., Marion, N. C.

Of the numerous diseases caused by faulty nutrition, there are two which stand out prominently, namely: scorbutus and rickets.

Scorbutus results from the absence in the food of a body of unknown nature, but probably allied to the digestive ferments which control the proper digestion, absorption and elimination of food; it is characterized by spongy, bleeding gums, tender swollen joints, extreme hyperaesthesia of lower extremities, with marked anaemia.

Lesion.—The disease shows itself in the bones, blood vessels and blood, by periosteal haemorrhage chiefly of the bones of the lower extremity.

Symptoms.—Marked pallor, weakness, tender bones and limbs, especially the legs, spongy bleeding gums and frequently blood in the urine.

Diagnosis.—Diagnosis is simple and should not be confounded with rheumatism; the age of the child and localized pain in lower extremities only, will help you to decide.

Treatment.—Change of food, for it will invariably be on the wrong kind; wet nurse, if possible, and if on a milk diet, see that

*Read before the recent meeting of the North Carolina Medical Society at Morehead City.

milk is not devitalized by prolonged heating. Modified cow's milk to suit the child's digestion. Fruit juices a good, but in one of my cases was not tolerated on account of too frequent movements. In that case, I gave beef juice and vegetable broths. In one other case, sent to the mountains from South Carolina, I gave egg albumin with orange juice with good results.

Rickets.—That condition which is due to perverted nutrition affecting nearly every tissue in the body, particularly the osseous system. A common result of faulty diet and anti-hygienic conditions, it is almost certainly a disease which comes from a deficiency of fat assimilation, whether due to insufficient fat in the food, or to not being absorbed by the digestive system. Its common occurrence is due to too much starchy food and too little fat. This, together with anti hygienic conditions, causes rickets.

Pathology.—I will only briefly mention the inflammation of the epiphyseal cartilages and periosteum, marrow and the bone, changes in the cranial bones, retarded ossification, open sutures; large-size fontanel, craniotabes, the thinning of cranial bones, changes in vertebrae and ribs, producing the rachitic rosary.

Effects on Dentition.—As might be expected, dentition is delayed, the lower central incisors will not appear before the ninth or tenth month, and when the teeth do appear, they are frail, deficient in enamel and crumble easily.

Changes in Soft Tissues.—The ligaments become relaxed and flabby, the muscles undeveloped, the abdomen prominent from depression of thoracic walls, and weak abdominal muscles, is one of the diagnostic symptoms.

Symptoms.—Aside from those already mentioned, indigestion and catarrh of the bowels, sweating of head and neck, restless and awakens easily, fretful and peevish, easily excited, veins prominent, flesh appears sore and slight fever. Constipation is also marked in some cases.

Diagnosis.—Inquire into the history, inspect the gums for retarded dentition, the state of the fontanels and sutures, also the pot belly, and the diagnosis is quickly arrived at.

Treatment.—Restore healthy nutrition by hygienic and therapeutic measures. Pure air and better diet, human milk, if possible, modified cow's milk, meat soups, and in a child over two years a nutritious diet of farinaceous foods. Medicines used: lime and cod liver oil, with occasionally iron and the bitter tonics.

Diarrheal Diseases.—We have many cases of diarrheal diseases in artificially fed children. The per centum of death from nurs-

ing children is so small, compared to the artificially fed child, that we always feel safe (or reasonably so) in looking for the cause of the diarrhea along other lines in breast-fed children. It has been my experience, and in every case except following acute infectious diseases, to find the diarrhea in bottle-fed children to come from some disturbance of nutrition. It is not every time the artificial feeding itself is to blame, but ignorant feeding and improper food. Pure milk, better hygiene, and a better understanding by the mother or nurse how to administer it will remedy this to a great measure.

Summer heat is a great factor in causing disturbances of nutrition with resulting diarrhea. Situated in the mountains with an altitude of 1400 feet, we have cool nights during the summer months, especially in July and August. It has been my privilege to treat several babies from the central and eastern portions of the State with chronic diarrheal conditions; and it is wonderful to see how they take on new life, having the cool nights to recuperate. I attribute what little success I have had with them in a great measure to this.

As to General Treatment.—First, good hygienic surroundings fresh air is of the utmost importance. Keep children out of doors as much as possible in chronic cases; a change of residence to seashore or mountains. I have noticed improvement in a change of only a few miles. Absolute cleanliness and light clothing. In chronic cases, where patient is weak and emaciated, light flannel is preferable.

Dietetic Treatment.—In acute cases, withhold all food at once until the stomach becomes settled, especially milk, if the nausea is severe, give stomach complete rest for several hours, beginning feeding again with barley water add egg albumin. When milk is begun, sterilize it and gradually increase with well diluted milk free from fat. In chronic cases there will be times when you will have to withhold milk and substitute broths, thin gruel, &c., but I rely on modified cow's milk for regular diet. If a wet nurse is employed, especially in cases of mal-nutrition, following acute attack, remember the child is weak and not strong enough to get the flow of milk started, and no stated number of minutes for nursing should be recognized. One case I call to mind where a baby suffering from chronic ileo-colitis was nursing every two hours for five minutes, and was so weak that it could not start the flow of milk, and was gradually starving to death.

Medicinal Treatment.—Clear out the entire intestinal tract thoroughly, early irrigation of the colon, calomel, castor oil and

the salines, while bismuth, catechu and opium are good secondary measures. In cases where there is much prostration French brandy, well diluted, is beneficial. In several cases of chronic bowel trouble, with ulcerated condition of the colon, have obtained good results by placing high up in colon olive oil with a few drops of carbolio acid and tr. opium, and giving internally iodine in an emulsion.

I will close by giving a brief history of a case of Arthrepsia Infantum. Conditions like this are often met with here, children coming from eastern portions of the State.

Baby twelve months old; tuberculosis and syphilis as causative factors eliminated; inquiry into cause found prolonged attack of ileo-colitis, with gradual wasting conditions following, and at my first visit stools liquid, greenish color, abdomen distended with gas, tongue coated, tissues flabby and soft, skin hanging in folds from the thighs and arms, the stools very variable, sometimes brown and very offensive, at other times putty colored, temperature below normal, face pallid.

Treatment.—This case come from a distant city and the change of air and altitude was beneficial from the beginning. Milk was discontinued, and began with barley water, later giving beef juice and beef blood, and as baby grew stronger, added peptonized milk in increasing amounts until recovery. I want to also add, for the first ten days an olive oil bath was given each night and afterwards wrapped in absorbent cotton. For the first few days the baby was so weak and stomach so irritable that a solution of brandy was employed per rectum, with a pledget of cotton placed to keep it from returning. No drugs were given for six weeks, then was put on tonic treatment.

The Diagnosis and Treatment of Hypothyroidism.*

By Stuart McGuire, M.D., Richmond, Va.

The thyroid gland is in many respects the most wonderful organ in the body. Through its internal secretion it influences the physical development of the child, and the psychic condition and mental activity of the adult. It regulates the growth of bone, the formation and distribution of fat, and the nutrition of the skin, teeth, hair and nails. It plays an important part in menstruation and parturition, and has much to do with sexual desire and power. It influences the rate of the heart beat, the character of the peripheral circulation, and

hence markedly affects the general blood pressure. It presides over the nitrogenous metabolism of the body and in other known and perhaps unsuspected ways plays an important part in the human economy.

Many theories have been advanced to explain the protean action of thyroid secretion, but at this time it is impossible to say which is the true one. Either as a neutralizer of endogenous toxins, or as a hormone stimulating other organs and tissues to activity, or by some other obscure but patent influence, it is the pace maker for the body. Thyroid secretion seems to act as the gasoline for the human automobile. If the lever controlling its supply is advanced then the engine races, the gears grind and the whole machine throbs and vibrates. If the lever is retarded then the engine knocks, the pistons hang, and the halting machinery momentarily threatens to come to a standstill.

If thyroid secretion is excessive there are symptoms of metabolic riot. Heat production and gaseous interchange are rapid. The body tissues are stimulated to a course of wasting dissipation. There are seen tremor, sweating, tachycardia, muscular weakness, loss of weight and feverish mental activity.

If thyroid secretion is deficient the metabolism of the body is depressed and heat production and gaseous interchange are at a low ebb. In the young, growth is lessened and the skeletal system is dwarfed. Connective tissue cells remain myxamatous. The skin is dry and thick and the hair is coarse and shows deficient nourishment. The nervous system halts in development and mentality does not rise above the level of the infant.

My interest in the thyroid gland was first attracted by the cases of exophthalmic goitre that came to me for surgical treatment. The symptoms in the advanced type of this disease were so dramatic and the results of operations directed to reducing the supply of thyroid secretion to the system so immediate and remarkable that I was tremendously impressed with the important role the thyroid gland played in the physiology of the human organism.

A study of hyperthyroidism as seen in exophthalmic goitre naturally lead me to the study of hypothyroidism as seen in myxedema, and the increasing number of cases coming under my observation where the symptoms were demonstrated to be due to excess of thyroid activity led me to wonder if there were not an equal number of patients who suffered from symptoms due to deficient thyroid secretion.

Any diagnostician will of course recognize at once a fully developed case of ex-

*Read before the North Carolina Medical Society June 18, 1913.

thalmic goitre with its staring eyes, bulging throat, tachycardia, tremor, sweating, nervous irritability and loss of weight, or a marked case of infantile myxedema such as has been so graphically described by Osler. The stunted stature and squat figure; the blubber lips, sunken nose, lolling tongue and half closed eyes, the expressionless face, thick skin and coarse hair make a picture that cannot be mistaken.

But there are other cases where the symptoms due to perverted thyroid secretion are not so clear and well defined, and cases of mild hyperthyroidism have often been treated for hysteria or neurasthenia, and cases of mild hypothyroidism have often been treated for anemia or malaria.

Surgeons in recent years have learned to be constantly on the watch for symptoms of hyperthyroidism and many cases of the disease are diagnosed and treated in the incipient stage, but physicians as a rule have not yet been trained to the same vigilance in the detection of the early symptoms of hypothyroidism, a condition of equal frequency and importance and one much more easily treated.

From observation and study I am satisfied there are a large number of patients who suffer from thyroid poverty and who drift from physician to physician without the cause of their symptoms being suspected.

A proper diagnosis in this class of cases must be based on a thorough knowledge of the physiological action of the thyroid gland and a study of the symptoms that follow its perverted function. In doubtful cases thyroid extract may be given in small doses as a therapeutic test, and continued if it does good and discontinued if it does harm.

Thyroid extract should never be given in cases of heart lesion, albuminuria or glycosuria. In other cases if it produces dizziness, intoxication or cardiac disturbances it need not be discontinued at once as the untoward symptoms can be relieved by the administration of Fowler's solution of arsenic. The dose of thyroid extract should be a small one, not over two grains three times a day and the common mistake should not be made in acting on the belief that if a little is good more will be better. A small dose long continued is safer and more efficient than a large dose given for a short time. It must also be remembered that many of the thyroid preparations on the market are absolutely inert and the physician should either prescribe a standardized tablet made by a reliable house or else activate the tablet of unknown efficiency by combining with it several grains of iodide of soda.

Thyroid extract has been recommended

as almost a specific in a long list of diseases, but the indiscriminate use of the drug is to be condemned, as large doses are dangerous and small doses frequently repeated may permanently impair the patient's health. It is a poison and should never be prescribed unless the case is kept under observation while it is being administered.

I would like to report a number of cases suffering from widely varying symptoms that I have treated and relieved by the use of thyroid extract, but the time at my disposal for the preparation of this paper has been too limited to allow me to look up their histories and records. I must content myself, therefore, in being suggestive rather than explicit and simply state that I have personally found the substitution thyroid treatment of unquestioned benefit in selected cases embraced in the following heads:

1. Cretinism.
2. Myxedema (spontaneous and post-operative).
3. Parenchymatous goitre—especially in girls about the age of puberty.
4. Amenorrhœa and chlorosis.
5. Absence or failure of sexual desire or power.
6. Obesity.
7. Eczema of the dry or scaly type.
8. Delayed union of fractures.
9. Certain neuropathic conditions where the patient is apathetic and drowsy with slow pulse and cold skin.

Hiccough.*

By Benjamin Earl Washburn, M.A., M.D., Bostic, North Carolina.

The subject of my paper is a symptom rather than a disease. Beginning with a definition, a hiccough is a short inspiratory sound with spasm of the glottis and diaphragm. A causal definition may be given as "a spasmodic inspiration, consisting of a sudden contraction of the diaphragm, accompanied with closure of the glottis, producing a sound."

Hiccough is regarded by the laity as a very grave symptom. Often in the case of strong, robust patients, hiccough from any cause is a sign of uneasiness and sometimes of a general panic among the family and relatives. An incident illustrating this view may not be out of place, since it also shows one form of treatment. The patient was of a neurotic type and had been ill for several months. She lived four miles or more from the doctor, who had made many visits with little success. The trouble was first of a digestive nature but soon developed into

*Read at the meeting of the Rutherford County, N. C., Medical Society, April 8, 1913.

globus pure and simple. The incident I am going to relate occurred about midnight in January, during a heavy rain, and with the thermometer about fifteen degrees above zero. The patient had become very nervous and had begun to hiccough; the doctor was 'phoned for—a hurry call; the neighbors and relatives were sent for; and, above all, the patient asked that the preacher be called in. When the M.D. arrived he found the room full of people, all excited and talking in muffled tones; the parson was reading a chapter from the Bible; and the patient was lying flat of her back on the bed, hiccoughing for dear life. The physician was informed that she was sinking fast, and that she had been too weak to speak for nearly an hour. The bed covering was turned down and her gown had been opened that she might get more air. The doctor, knowing his patient and being somewhat nettled by his cold drive, used heroic measures. He stepped out on the porch and brought the bucket, half filled with water and ice, and dashed it with some force on the patient's bare chest. She sprang up with a scream and ran to the fire, pronouncing fierce anathemas on the physician. By the time she was calmed and dried the hiccough had stopped, the crowd had dispersed, and the minister was heard puffing off his shoes in the room overhead.

Hiccough has been regarded as an untoward symptom during all ages. It is mentioned by the earliest medical writers. Hippocrates, the father of medicine, who lived about the fifth century before Christ, has the following aphorisms regarding hiccough:

"Hiccough supervening in dropsical cases is bad.

"Hiccough and redness of the eyes, when they supervene on vomiting, are bad.

"In hypercatharsis of old persons hiccough supervening is not a good symptom."

And somewhat later, Plato in his Symposium tells in the following manner of the physician Eryximachus recommending to Aristophanes, who had hiccough from eating too much, either to hold his breath (which for trivial forms is very satisfactory) or to gargle with a little water; but if it still continued, "tickle your nose with something and sneeze; and if you sneeze once or twice the most violent hiccough is sure to go."

The mechanism of hiccough is somewhat complex. It is a modified respiratory movement taking place during inspiration, caused by an involuntary contraction of the diaphragm, accompanied by closure of the glottis, thus cutting off the air just entering, which, striking upon the closed glottis, gives rise to the characteristic sound. The

diaphragm is supplied by the phrenic nerves, one of which arises on each side from the 4th cervical nerve, with branches from the 3rd and 5th cervical, from the sympathetic, and sometimes from the vagus. Some of the lower intercostal nerves also contribute to the sensory innervation and possibly also to the motor innervation of the margin of the muscle. The sympathetic nerves furnish fibres for the blood vessels.

Osler¹ describes it as follows: "The afferent impressions to the respiratory center may be peripheral or central, the efferent are distributed through the phrenic nerve to the diaphragm, causing the intermittent spasm, and through the laryngeal branches of the vagus to the glottis causing sudden closure as the air is rapidly inspired."

The symptom is produced by anything causing an abnormal stimulation of the nervous mechanism of the diaphragm. These causes are numerous and varied.

(a) The primary cause may be some lesion of the nervous system and account for the hiccough seen in hysteria, epilepsy, shock, or brain tumors.

(b) The peripheral causes are numerous and may be divided into:

1. Inflammatory—seen in affections of the abdominal viscera, gastritis, peritonitis, hernia, ileus, appendicitis, pancreatitis, and typhoid fever. The symptom is also seen after any abdominal operation, and may occur in neuritis or influenza, especially in the aged or debilitated.

2. Irritative—as in the direct stimulation of the diaphragm in the swallowing of very hot substances; local disease of the œsophagus near the diaphragm; and in many conditions of gastric and intestinal disorder, more particularly those associated with flatus. Cases have also been reported where the cause was some irritation to the phrenic nerve, as pressure from a tumor of the liver.

3. Specific or idiopathic in which no evident causes are present. In these cases there is usually some constitutional trouble as gout, diabetes or Bright's disease.

The usual cause of hiccough in infants is some irritation in the stomach, is often seen after eating, and may depend upon over-filling the stomach with food or the swallowing of air. Other cases have no relation to taking food and may be regarded as a form of reflex spasm with a variety of causes, such as cold feet, chilling during a bath, or suddenly taking the infant from a warm bed into a cold room. In addition to these, the same causes apply to infants as to adults.

1. Osler, William: Principles and Practice of Medicine. Ed. 6, 1907, p. 1034.

During the last twenty years several writers have reported cases of fetal hiccough. The movements that have been ascribed to hiccough-like contractions of the fetal diaphragm have been noticed in the latter part of pregnancy and generally can be felt by the mother. They are felt as sharp, quick impulses, about 15-20 a minute, and lasting usually for a minute or two, when a quiet interval occurs. Sometimes they occur uninterruptedly for 10 minutes. The impulses can be felt by the hand placed on the abdomen or can be heard with the stethoscope. Ahlfeld² believes that this occurs as a physiologic function of the diaphragm in practically all persons. He thinks it is more frequent in early pregnancy, and may be heard even before the heart-tones.

The treatment of hiccough is very unsatisfactory and should be directed to removing the cause, whenever possible. In the majority of cases, however, this is impossible and the treatment must be entirely symptomatic. Some cases of hiccough are very easy to relieve, any of the simple remedies being efficacious; others are more persistent and derive very little benefit from treatment. In patients of a hysterical nature, hiccough is very retractive and may last for weeks or months.

The treatment of hiccough may be of two characters:

1. The treatment by non-medicinal measures. Among the procedures mentioned, the following may prove of benefit—make strong traction on the patient's tongue, make him gargle or sneeze. Reading aloud stops the spasm in some instances. Counter-irritation over the epigastrium, as a mustard plaster, an ice cap, or the ether spray may prove efficacious. Galvanism over the phrenic nerve or pressure on the nerves, applied between the heads of the sternocleido mastoid muscles, may be tried. Hypnotism may prove of value in these cases. Anything to divert the patient's mind—fright, worry, anxiety—may stop the hiccough. Dilatation of the sphincter ani may give relief, as may also the passing of the stomach tube. The latter is of special benefit in post-operative cases, even though there is no gas in the stomach. Jodicke³ in a very serious case of hiccough flexed

the legs and thighs against the abdomen so that the intestines were forced up against the diaphragm. This proved promptly curative. Putting the patient in the knee-chest position may produce the same effect. In persisting cases a change of diet may be of benefit. Kanngiesser¹ has found warm oatmeal gruel very helpful.

2. The medicinal treatment of hiccough is confined to drugs which act on the stomach and to antispasmodics and depressants. The remedies affecting the stomach act either by emptying the organ of some undigestible substance or in a mechanical way by inflating the organ and causing it to press against the diaphragm. Apomorphine may stop the hiccough; and a brisk cathartic may have a similar effect. Of the simple remedies ice, salt and lemon-juice, salt and vinegar, vinegar and sugar, or a teaspoonful of whiskey may be tried. Hoffman's anodyne or 20 drops of chloroform in a glass of water may be efficacious. In cases caused by flatus, the Aromatic Spirit of Ammonia or the Tr. Asafetida will often be all that is needed. Hypodermics of atropine, of morphine, of hyoscyne, or of nitroglycerin are useful in persisting cases, as are also injections of scopolamine. Inhalations of chloroform or the use of amyl nitrite have been used with success. Pilul carpus, musk, camphor, menthol, belladonna, capsicum, oil of cajuput, and chloral have been recommended.

In hysterical patients the following mixture will often be of benefit: equal parts of the Tr. Asafetida, Fl. Ext. Valerian, and Spt. Ammonia Aromatic. Another useful prescription is Tr. Hyoscyamus, Tr. Nux Vomica, and Tr. Belladonna, equal parts.

In infants teaspoonfuls of hot water, either alone or in connection with a hot enema and heat applied to the epigastrium, will often give relief. The most useful drugs for this class of patients are antipyrin and chloral given in very small doses.

Serum Treatment of Hemorrhagic Disease.*

By Charles R. Grandy, M.D., Norfolk, Va.

This evening I wish to call the attention of this society to the treatment of hemorrhagic disease by means of blood serum, which now has generally come to be considered as the only really rational and successful treatment of hemophilia and its kindred diseases—the hemorrhagic diseases of the new born, and purpura. At the same time I wish to report a case and call attention to some interesting points found in its history.

*Read before Norfolk County Medical Society April 21, 1913.

1 Kanngiesser, F.: Persistent Hiccough. Medizinische Klinik, Berlin, March 26, 1911.

2 Queries and Minor Notes, in Journal of the American Medical Association, April 15, 1911.

3 Jodicke, P. and Rethy, G.: Treatment of Persistent Hiccough. Medizinische Klinik, Berlin, May 28, 1911.

In 1910 Welch¹ reported eight babies with hæmophilia neonatorum as successfully treated with human blood serum, as much as 209 c.c. having been given to one baby in five days. This work which, judging from results formerly obtained in the New York Lying In Hospital by the use of such medicine as epinephrin, calcium salts and gelatine, saved at least seven babies out of the eight, drew the attention of the country to this treatment. The next year Schloss and Commiskey² modified this treatment by using whole blood drawn in a syringe from the vein of the father and injected subcutaneously into the infant. In the same year Vincent³ in Boston perfected a glass tube which allowed direct transfusion from an adult's artery into an infant's vein—generally the femoral vein. Since then various reports have appeared of the use sometimes of human, and other times of foreign, serum in the treatment of hæmorrhagic disease. In hæmophilia neonatorum human blood from the child's father administered in any one of the three ways quoted above seems to be the proper proceeding. But in adults one always has a feeling of suspicion towards serum from other adults, while serum from a different animal may produce anaphylaxis, if given in considerable quantities, as proven true in the cases of chronic purpura treated by Elsner and Meader⁴ by repeated injection of foreign serum, though this was the only remedy that controlled the symptoms. In an article recently published by Lee and White⁵ of the Massachusetts General Hospital on the coagulation time of the blood, using blood drawn directly from a vein into a glass syringe, the clotting time of the blood was increased most markedly in hæmophilia, but also in purpura and some liver cases with jaundice. All of these cases are known to have a tendency to bleed, and all have been improved by injections of serum. One interesting point in their paper is that typhoid fever with a tendency towards hemorrhage showed a lengthened clotting time, while in other cases the clotting time was near normal, (i.e., about five minutes). Other septicemias also showed a lengthened clotting time. It is generally acknowledged that there is something lacking in blood in which clotting is thus delayed, but what that substance is, seems as yet to be undiscovered. The various theories can not well be discussed in a short paper like this, but can be found in some of the articles quoted.

Family History.—Patient reported is a woman. Her paternal grandfather, her father, one uncle and two aunts had a tendency to bleed, this being especially true of one aunt and one uncle. The aunt suffers

from menorrhagia and from epistaxis, and the uncle terribly from epistaxis. She is one of six children, three boys and three girls, of whom four, two boys and two girls, bleed. The brothers suffer most from epistaxis, while the sister also has epistaxis and almost no menstrual flow. They also bleed very freely from any small wounds, the tendency being to bleed whenever they get run down.

Past History.—Patient had her first epistaxis when nearly seventeen, not menstruating till that time, but was subject to hemorrhages from bowel ever since she was five years old. This first accompanied a dysenteric attack and was very free. She has also had similar attacks up to the summer of 1911, scarcely skipping a year. She also suffered greatly from menorrhagia, the periods lasting about a week and being very free for four days. She had attacks of epistaxis in periods varying from once in two months to twice a year. These attacks would come two or three times a day and keep up for a month, being more frequent and worse when she had been worked down. She would in her worse attacks bleed over a pint, the ordinary amount being about eight ounces. Her nose was cauterized twice with apparent help, but each time this was done when the attack was on the wane. She has had repeated attacks of malarial fever and has taken quinine, which increased both her menses and epistaxis. She has also suffered from nausea and possibly had some trouble with her gall bladder. When she was a child of twelve she had "rheumatism," especially in right hip and knee, but there was no purpura. She has had slight attacks of rheumatism in right knee since then.

Present Attack, March, 1912.—Patient had been having severe epistaxis once or twice a day for two weeks. This was accompanied by coryza. She also had been working very hard and was nervous. She also had menorrhagia. Patient was put to bed in hospital, but rest and adrenalin had no special effect on epistaxis. Packing only had temporary effect, her blood clotting pretty well, though it would at times run through the cotton. Ten c.c. of horse serum was given by hypo., which checked the bleeding, and was repeated in three days. After the second dose there was only one slight hemorrhage, which stopped of itself almost immediately—a thing which she had never seen it do before. After three days she got about seven c.c. of human serum. She made a prompt recovery.

September, 1912.—Patient has not had another attack of epistaxis, though she has worked very hard. Her menorrhagia is also better and she is feeling and looking

better than ever before.

March, 1913.—Patient has had two attacks of epistaxis since she was last seen; both of these followed rather hard horse-back rides, and both stopped spontaneously. There have been no periods of bleeding since she had the serum.

The family history of this case is rather remarkable, as the case occurred in a woman who inherited hæmophilia from her father and paternal grand-father, whereas the usual history is for it to occur in men, who inherited the tendency to bleed from their maternal grand-fathers through their mothers, who as a rule do not suffer. Then in this family the cases are equally divided between men and women in the last two generations, there being two of each sex in the patient's generation and her father's. The proportion as usually given is that it is thirteen times as frequent among men as among women. In treating this case ordinary horse serum was efficient and gave no anaphylactic symptoms. It is however dangerous at times and rabbit serum or human serum are less apt to give trouble. If only three or four doses are necessary, I can see no reason why horse serum should not be used, unless the patient has previously shown a reaction from this kind of serum. It can certainly be used in milder cases of bleeding, as was successfully done by the writer in an exsanguinated girl, who had been menstruating four months, after the case had first been cured under gas anesthesia. In children with a tendency to bleed, where a proportionately large amount of serum must be used, human serum, preferably from one of the parents, is undoubtedly the proper thing to use. In some of the worse cases direct transfusion with Vincent's tube has been reported as giving really wonderful results. Cases with jaundice and a slow clotting time should certainly get serum before operation to prevent a possible hemorrhage. In such a case horse serum will be the proper remedy.

While the use of serum in hemorrhagic disease has been reported by a number of people, especially in babies, still the writer feels that this report is excusable from the rather remarkable case history and the prompt results obtained by this treatment, when all other treatments had proven futile. The good results from this treatment have now lasted for a year, and though the treatment may have to be repeated in the future the immediate results have certainly justified the use of serum in this case of hæmophilia and will cause the writer to repeat it, if necessary, in this case or in any similar case, that may come under his care.

I. Welch, J. E., Normal Human Blood Serum as a Curative Agent in Hemo-

philia, *Neonatorum-Bulletin of Lying-In Hospital of New York*, March, 1910.

2. Schloss, O. M., and Commiskey, L. J., Spontaneous Hemorrhage in the New Born, *Am. Jour. of Diseases of Children*, April, 1911.
3. Idem, April, 1912.
4. Vincent, B., Blood Transfusion in Infants by Means of Glass Tubes, *Am. Jour. of Diseases of Children*, May, 1911.
5. Elsner, H. L., and Meader, F. M., Chronic Purpura, *Am. Jour. Medical Sciences*, February, 1913.
6. Lee, R. I., and White, P. D., Study of the Coagulation Time of the Blood, *Am. Jour. Med. Sciences*, April, 1913.
7. Litten M., The Hemorrhagic Diatheses, *Modern Clinical Medicine*, 1906.

"Hereditary Alcoholism an Undeniable Fact."

By J. W. Williams, M.D., Richmond, Va.

"Alcoholism strikes a man not only in his own person, but in his own descendants."—Dr. Lunoir, Paris.

"God will visit the sins of the fathers upon the children unto the third and fourth generation."—Moses. Ex. x. x. 5.

For many years it has been recognized by breeders of horses and dog fanciers that the effects of heredity are undeniable. We are indebted to Sir Francis Galton, F.R.S., for the term "Eugenics." The first Eugenic Congress has just been held in the University of London, presided over by I. Darwin, son of the great evolutionist. "It was organized to spread a knowledge of the laws of heredity—the science that deals with all the influences which improve the unborn qualities of a race with traits that are in the blood—the protoplasm." Four hundred delegates were present from all nationalities. As seed is more important than cultivation, so is the healthy hereditary germ cell—spermatozoa and ova—of more importance to the race and to society than culture and refinement. Children represent the life and vitality of their parents. All facts show that the antecedent vitality of parents and even grand parents influence the life of a child. To be "well born" is not to be born in "high society" or to riches, or born to inherit one or all of the crowns of Europe, but at least one or two generations of healthy, normal parents must precede such birth—the ancestral germ cells must be free from contamination. The testimony of medical and sociological science corroborate the statement of the great Hebrew law-giver, that the "iniquity of the fathers" affect their children, under the laws of heredity, to the "fourth generation." The father is the trustee of the germ cell, and

the healthy germ cell is more important to his child than "high society" or culture and refinement.

Every life, vegetable or animal, at its origin, passes through a germinal phase of existence and is modified, negatively or positively, by the unhealthy or healthy condition of the germ cells. The original protoplasmic cells (spermatorrhoea and ovum) which unite to form the beginning of the future child consists of a highly endowed protoplasm possessed of the function of "development," thereby surpassing the powers of all other cells of the human body. Now these germ cells may be initially healthy or diseased, feeble or devitalized as they start upon the journey of life with pure or impure blood from either one or both parents; and, in thousands of instances, injured by protoplasmic poisons—syphilis, tuberculosis, and more especially by alcohol and morphine. The late Dr. Marion Sims declared that syphilis "had destroyed more of the human race than the bullet." And statistics show that 125,000 deaths are placed to the credit of tuberculosis annually in the United States alone. No human being who is addicted to either of these potent drugs can escape the consequences of the "addiction" under the laws of heredity. We have treated fifteen physicians, among others, who were absolutely slaves to morphine and utterly unable to free themselves from its awful curse and slavery. Fifty per cent. of the children of all such habitues are degenerates, as is well known; and, thus, science confirms the remarkable statement of the Mosaic Law. Sir Victor Horsley demonstrated that alcohol is found in the *foetus in utero*, and Dr. Wigglesworth declares that a "direct poisoning of the germ cell itself by the alcohol and morphine circulating in the blood, and a consequent direct injury to the cells of which this struction is composed and which by the reason of the injury are prevented from developing a stable organism. If the alcoholic poisoning of the germ cell and ovum has reached a certain degree of intensity, imbecility and even profound idiocy may be expected to result, while if of a less degree the injury may manifest itself in the various forms of adolescent insanity, when adult life is developing, or has been attained.

Dr. Potts, a notable investigator, tells us "that when a toxin finds many victims *in utero* some of those who escape premature death must only just do so, and can hardly have an average mental and physical endowment. Some of these individuals may pass as normal up to a certain age, when in consequence of their original poor stock of vitality, early mental or physical

decay will appear."

Within ten miles of my office, in Hanover county, Va., there lives a widow with three sons begotten by a drunken father, and all three perfect idiots, unable to attend even to their personal necessities. One about 40 years of age, another about 35, while the third one died. I rode out to see for myself, this visitation of the sins of the father upon the first generation, under the laws of heredity. The sad, clinical picture is still upon the page of my memory—the poor dejected mother and her helpless offspring. Other cases of like nature I could mention. Dr. Kerr states a case, typical of hundreds of others, in which was born a son and a daughter who were vigorous specimens of humanity, mentally and physically. After the birth of the daughter the father became an habitual drunkard. He had four more children, of whom one was defective in mind while the remaining three were complete idiots. Fourteen years ago a committee of American physicians were appointed to investigate the influence of heredity as a cause of inebriety. Over 3000 cases were investigated. Dr. Crothers, the chairman, says: "The heredity of inebriety is established from such studies beyond all possible question and doubt. The central conclusion, which cannot be stated too strongly, is: that the injury from alcohol to the cells and nervous tissue is transmitted to the next generation with *absolute certainty* in some form or other. It may not appear always in the drink and drug symptoms, but the injury breaks out again in some neurotic trouble, defect or predisposition. "Scientists, properly, experiment first upon the lower vertebrata, guinea pigs, rabbits and dogs chiefly, before they investigate the effect of drugs upon man. Prof. Hodge mated two alcoholized dogs. "Out of 24 puppies in four consecutive litters, only four proved viable." He then mated two normal dogs. "Out of 45 puppies in eight consecutive litters, 41 were viable." Prof. Domme investigated 10 alcoholic and 10 non-alcoholic families, with this result:

Alcoholic Families.		Non-alcoholic Families.
Number of children	57	61
Deformed	10	2
Idiotic	6	0
Epileptic	6	2 backward
Non-viable	25	3
Normal	10%	88%

Prof. Latinen studied the effect of alcohol in small doses given daily for eight months to rabbits and guinea pigs. "Only 51 per cent. of the alcoholized animals lived, while in the 'control bases,' to which only water was given, 62 per cent. of the

offspring lived."

Dr. Feri says, "when guinea pigs are subjected to the continuous use of alcohol during pregnancy morbid changes are found in the brain of the offspring. There is also a marked stunting and deficiency of growth and weight. There is a much greater tendency to disease and death."—"The Hygiene of Mind."

The Episcopal Church in its Council at Lexington, Va., has just passed a resolution by a large majority, demanding a certificate from the prospective groom's family physician that the groom is free from "all communicable diseases," before any clergyman can marry the parties. This is a move in the right direction, and will, if seconded by other denominations of Christians, work out to the betterment of humanity.

Box 15, Station B.

Nineteen Cases of Pellagra Treated with Gelsemium.

By Roy Blosser, M.D., Atlanta, Georgia.

So far as can be determined from the English literature on pellagra the administration of gelsemium in this disease had not been tried previous to its use in the five cases reported by the writer in November, 1912.¹

Of the nineteen cases included in the present report, eleven occurred in the practice of Dr. L. P. Pharr, of College Park, Ga., to whom the writer acknowledges considerable indebtedness for aid in carrying out the treatment and in keeping records of the cases. This series of cases includes the five previously reported.

While admitting that there has not been sufficient time to fully demonstrate the value of gelsemium in the cases reported on account of the exceedingly chronic nature of pellagra and its annual remissions and exacerbations, the following facts seem to indicate that the use of this drug will prove to be of great value in the treatment of pellagra. (1) Every case of pellagra so treated, excluding patients numbers 18 and 19 whose condition appeared hopeless from the start, has made rapid improvement in every respect. (2) Up to June 10th none of these had shown any indication of a recurrence further than some degree of malaise during the first warm weather; other cases in this locality have, during the same time, experienced a return of the eruption and other pellagrous symptoms. (3) While some of the writers' patients are not yet cured, he feels justified from past experience in assuming that a continuance of treatment will give as good results in these

as in the earlier cases treated, inasmuch as they do not appear to differ in any essential particular. (4) The remedy seems to be effective at any time of year; those patients treated this spring have responded well to the treatment, although they have been somewhat depressed by the warm weather and have not gained in weight as rapidly as those treated during the cool weather. (5) Thirteen of this series had previously been diagnosed and treated as pellagra; eleven of them had been unable to see any benefit from the previous treatment and had grown worse. Two had improved for a time but for six or eight months had been unable to see any further benefit from the treatment.

The dose of gelsemium used has generally been three drops of a fluid extract (made from the green root) three times a day after meals, but the writer has, in most cases, cut down the dose in a few weeks to two drops and later to one drop, continuing the latter until all pellagrous symptoms had disappeared.

In order to eliminate all doubt as to diagnosis, only those cases which had shown the characteristic eruption have been included in the above group. The writer has also treated about twelve cases in which the skin symptoms were lacking or atypical but in which there seemed to be sufficient evidence to warrant a diagnosis of pellagra—the so called "pellagra sine pellagra." These cases have been of a decidedly chronic type, giving a history of gastric and nervous symptoms for a number of years, and while they have done very well on the same treatment and diet as prescribed for the other cases, the improvement has not been nearly so rapid.

All of the cases included in this tabulation suffered from mental depression, despondency and impaired memory; in several orientation was, at times, markedly affected. Only two could be classed as insane (cases 18 and 19).

Vertigo has been a prominent symptom in all of the writer's cases. In one case (14) the patient was afraid to go out on the street on account of attacks of dizziness which would come on so suddenly that she would fall. Marie states that these attacks are termed pellagrous spells by those living in pellagrous districts.⁵

Menorrhagia and metrorrhagia have occurred frequently. Of the fifteen cases in females, two had passed the menopause and, of the remaining thirteen, six had suffered from some degree of excessive uterine flow. In three cases this had resulted in

1. The Atlanta Journal-Record of Medicine, November, 1912.

5. Lavinder and Babcock's translation of Marie's "La Pellagra."

Table Showing The Results of Treatment in Nineteen Cases of Pellagra.

Case	Age	Duration of Disease	Severity	Appearance as to Nutrition	Previous loss in weight	Duration of Treatment	Results	Gain in weight	In what respect not yet well
1	35	41 months	Very severe	Extremely emaciated	85 lbs.	20 mos.	Cured	50 lbs.	
2	48	5 years	Chronic, previously severe	Rather obese	2	9 mos.	Cured	15 lbs.	
3	45	2 years	Very severe	Extremely emaciated	50 lbs.	8 mos.	Cured	27 lbs.	
4	53	2 years	Very severe	Extremely emaciated	60 lbs.	8 mos.	Cured	30 lbs.	
5	26	2½ years	Moderately severe	Rather thin	10 lbs.	7 mos.	Said to be entirely well 3	?	
6	44	3 years	Quite severe	Very thin	34 lbs.	6 mos.	About well	20 lbs.	Strength not yet norm'l
7	41	2 years	Moderately severe	Obese	20 lbs.	6 mos.	About well	few lbs.	Somewhat constipated; slight eruption on forearms this spring. 4
8	34	4 years or longer	Quite severe	Very thin	43 lbs.	5 mos.	Great improvement	10 lbs.	Strength not yet norm'l, somewhat constipated.
9	16	6 years or longer	Very severe	Somewhat thin	20 lbs.	5 mos.	Great improvement	Few lbs.	Some constipation and indigestion
10	32	12 years	Rather severe, chronic	Thin	6 lbs.	4 mos.	Considerable improvement	7 lbs.	Strength not yet norm'l, some vertigo.
11	52	2 years	Rather severe	Good	15 lbs.	4 mos.	About well	8 lbs.	Slight vertigo at times.
12	23	1 year	Very severe	Very thin	25 lbs.	4 mos.	Great improvement	few lbs.	Strength not yet norm'l, some vertigo.
13	42	5 years	Rather severe	Very thin	20 lbs.	3½ mos.	About well	10 lbs.	A little itching and occasional insomnia.
14	28	13 months or longer	Very severe	Rather thin	30 lbs.	3 mos.	About well	20 lbs.	Some weakness of legs.
15	55	3 years	Rather severe	Somewhat thin	14 lbs.	3 mos.	About well	4 lbs.	Strength not yet norm'l.
16	45	2 years	Very severe	Badly emaciated	30 lbs.	3 mos.	Partially recovered	10 lbs.	Bowels somewhat loose, some burning of hands and nervous symptoms
17	50	17 months	Chronic, previously severe	Rather thin	30 lbs.	2½ mos.	About well	7 lbs.	Slight vertigo occasionally.
18	78	18 months	Very severe	Thin—feeble	?	6 weeks	Death—pneumonia		
19	56	16 months	Very severe	Emaciated	?	4 days	Death		

2. There had been considerable loss in weight when attack was at its worst, but when this treatment was begun patient had about regained normal weight.

3. Have been unable to get a definite report on this case.

4. Stopped treatment too soon, but eruption quickly disappeared after resuming it.

profound weakness from partial exsanguination.

The manner in which gelsemium relieves the pellagrous manifestations can only be surmised until we understand the etiology of the disease. If we accept the theory that the disease is due to some form of intoxication acting on the central nervous system, it would seem reasonable, in accordance with the effect attributed to the drug by some authorities, to suppose that its effect is produced by relieving this central irritation. Further than this we cannot say that pellagra presents the indications that are generally supposed to be met by gelsemium.

Only by accepting the theory that the effect of the drug is central can we explain the fact that it relieves such diverse symptoms as diarrhea, vertigo, burning sensations in the hands and feet, menorrhagia, etc. Its effect in checking diarrhea has been especially surprising inasmuch as gelsemium has never been credited with having any astringent or sedative action on the bowels. In some of the cases the diarrhea had been very severe and had not responded to opium and other drugs but promptly yielded to gelsemium. The same is true of its action in removing the epigastric tenderness and distress, improving the appetite, relieving

the inflammation of the mouth and tongue and irritability of the bladder.

As will be noted from the above tabulation most of the cases treated have made substantial gains in weight and, as suggested by Wood,⁶ this is probably the best criterion as to the results obtained in a given case, with the exception of those cases occurring in persons of an obese type in which the disease has not yet assumed a very severe form and the loss in weight has consequently not been extreme; in such cases there has not been a very marked gain in weight.

In this group of cases we have relied solely on gelsemium for relieving the pellagrous symptoms and have used other drugs only to meet certain indications. Constipation is generally present at some time and must be counteracted. We have generally given castor oil every second or third day at the beginning of the treatment. Olive oil is also beneficial, both as a food and for its effect on the stomach and bowels, and should be given a short time after meals. Iron is needed in some cases. We have tried several of the new arsenic preparations but have been unable to see any advantage to be derived from combining these preparations with gelsemium or from alternating the two drugs.

In every female pellagrin that we have seen there has been a condition of weakness and relaxation of the abdominal muscles which has indicated the need of a specially made and fitted corset and in those who were able to afford this luxury it has greatly aided in restoring the strength and preventing constipation. All ready made corsets make pressure on the epigastrium, and this is unbearable to a pellagrin. We generally find that these patients have discarded their corsets or are wearing them so loose as to give no support. The corset prescribed in these cases is similar to those recommended in abdominal ptosis—one which gives firm support to the abdomen below the umbilicus without making any pressure above this point. Our male pellagrins have also shown more or less enteroptosis and in most cases have been advised to secure an abdominal supporter.

All cases of pellagra have been given a varied and nutritious diet with plenty of meat, milk and vegetables; eggs have been allowed sparingly. During the last five months all of our cases have been advised to abstain from sweets with the exception

of a little white sugar. This was suggested by Deeks of the Ancon Hospital⁷, but we have made no attempt to eliminate carbohydrates to the extent advised by him.

In the previous report of cases treated with gelsemium the writer advised caution in administering the drug in the dose mentioned, calling attention to the depressing effect of an over dose and to the fact that cases have been reported in which a seemingly moderate dose produced serious results. We are now inclined to believe, however, that gelsemium is a much less dangerous drug than is generally supposed, and since adopting and specifying one manufacturer's preparation of the drug, made from the green root, we have not observed the slightest depressing or other untoward effect in any case. It seems probable that such actions of the drug in the past have been due to variability in the method of manufacture or to preparations which have been allowed to evaporate or to throw down a sediment. We have experimentally given ten drop doses of the fluid extract (three times the dose advised) to two healthy men, three times a day, for a week without producing any unpleasant effects whatever.

In the writer's experience, cases of pellagra of the acute type, even if quite severe, yield promptly to the gelsemium treatment, whereas cases of the chronic type, giving a history of years of stomach and bowel trouble antedating the appearance of the eruption have yielded more slowly. For example, case number one had been confined to bed two months, able to take only a very little nourishment, suffering day and night with pain in the feet; also, severe diarrhea and tenesmus. In four days treatment she was free from pain, able to be up, and made a rapid recovery. Case number ten is of the chronic, persistent type; she gave a history of stomach trouble nearly all her life, worse for the past twelve years, aggravated by warm weather; occasional attacks of vomiting; bowels somewhat loose; insomnia; despondency; vertigo and menorrhagia. The eruption on forearms, neck and thighs first appeared four years ago. She had rarely been sick enough to be confined to bed. In four months treatment she had gained seven pounds in weight, has not had any eruption this spring, and feels better generally, but is still nervous, has vertigo at times and there is still some degree of menorrhagia.

Morphinism.*

By W. C. Ashworth, M.D., Greensboro, N. C.

"When we approach the realm in which the drug habitue lives, moves, and has his

6. "A Treatise on Pellagra," by Edward Jenner Wood, S.B., M.D.

7. The New York Medical Record, March 23rd, 1912—"Pellagra in the Canal Zone."

being, it is well to remember that practically all the theoretical knowledge we may have gathered in regard to the nature of drug addiction must now be laid aside, for the subject under consideration is presented to us, not as a theory, but as an existing condition of lamentable reality. He who would successfully cope with this monster must be thoroughly equipped for that which will at times develop into a terrific combat, and he will need the helmet of tactful strategy, the breast-plate of confident, inspiring determination, and the whole armor of the alert, skilful physician and competent psychotherapist.

The use of drugs is universal. In all countries, in every climate, among all tribes and races, man has learned the action of certain vegetable and mineral substances, and classified them according to his experience with them. The poison, that which carries with it the possible sting of death, has ever attracted the human race. Man has ever flirted with temptation, but regretted her embrace.

Drugs possessing habit-forming properties have a peculiar seductiveness that but few persons can withstand after having become acquainted with their action. In small doses, the thought centres and faculties of ideation seem to be increased; fancy, for the time being set free, contributes a joyousness and careless freedom which the wearing cares of the daily struggle for existence cannot hamper nor suppress. In the larger dosage, which inevitably follows, the narcotic influence becomes more marked; co-ordination is impaired and relationship with the world at large is disturbed to such an extent that the victim exists in a dreamy, self-centred-world state, the return from which is disturbing and irritating. After a period of indulgence the unfortunate finds himself in the embrace of the enslaving drug, and because of the accompanying impairment of volition soon admits to himself at least, that he has become hopelessly ensnared in the meshes of habit, and that resistance will be needed in order to enable him to secure freedom.

Notwithstanding the oft-repeated assertion, made even by such as claim to have had opportunity for systematic observation, that the extent of drug addiction is constantly being overestimated, and that the danger to be feared from an increase of the same is more imaginary than real, the fact remains that drug addiction, especially that of opium or its alkaloids, and cocaine, is today a cruel, merciless monster, whose almost relentless grasp holds in a thralldom infinitely worse than slavery its legion of victims in all parts of the world.

The far-reaching effect of drug addiction

cannot be imagined, much less accurately determined, and only such as have had the opportunity of observing a bright, intellectual, and promising young man gradually lose his ambition, his character, his manhood, his all, and sink into an oblivion worse than death, can understand the full import of the assertion that drug addiction constitutes a most effective barrier to the elevation of some of our brightest minds, and too frequently clouds the most brilliant intellects."

The etiology of morphinism dates back almost from time immemorial. The human family seems, from the most remote antiquity, to have felt the need of artificial stimulation and something to blunt the sensibilities in the presence of unusual troubles or mishaps of any kind.

It is very true that the lulling influence of the juice of the poppy has played a very important role in the history of mankind. The Chinese were the first to cultivate and imbibe the seductive but subtle benefits of the poppy. A feeling of insufficiency and the universal dread of suffering are responsible, to a large degree, for the extension of the opium traffic and use in the United States. The exigencies of life and the latter day high cost of living have contributed their full quota to this large and increasing class of unfortunates.

The enslaving properties of the drug plus its devastating effects on both the mind and body easily make it the greatest menace to civilization of the present day.

It is estimated that only about ten per cent. of opium and its alkaloids, morphine, &c., imported to this country is used for medicinal purposes. It is therefore true that the large excess, beyond what is consumed legitimately, is consumed by the regular habitues of the drug.

The common belief, among the laity especially, that the opium and its derivatives are comparatively innocuous and can be used indefinitely with impunity is responsible, in a large degree, for the lamentable spread of the habit. It is a fact, however, that the habitual use of morphine is not only a constant menace to the health of the user, but life itself is often endangered and a serious train of disastrous results rapidly follow in the wake of its use.

The average morphine user is a parasite on the community; being unproductive and content, in most instances, to while away his time under the seductive influences of the drug. The exhilaration or euphoria incident to the use of the drug is a temptation for its continuance that very few can withstand after having once experienced it.

Effects of Morphine.—It is a fortunate thing for some people that the use of mor-

phine or any opium is followed in a few hours by the most dreadful depression and nausea. There are a large number of people who suffer in this way and as a consequence there is little danger to them of contracting the morphine habit. They could only do so by suffering from so severe a chronic pain that they are willing to endure the after effects so as to get the relief the morphine gives. After a few doses or more, however, it loses the bad after effects.

There are others, and I believe they are in the majority, who never suffer this depression and nausea even with the first dose of the opium. Let us imagine one of these last suffering some excruciating pain,—toothache, earache, or colic,—to whom a dose of morphine (hereafter I shall use the word "morphine" intending to include therein all other opiates) is given. In less than an hour he has absolute relief from all pain, not only from all physical pain but relief from all mental worries and troubles. His mind works with renewed power and he has a self-confidence never felt before. His thoughts flow freely; his judgment is certain and absolute. He is full of a mental energy never felt before and through and over it all there is a solemn sense of happiness and content with self and surroundings.

The Judge, who has doubted his proper decision before, has all doubt removed. His mind is as clear as a bell and he *knows* what is justice and right. The doctor, worn out and exhausted from overwork, with mind only half acting, in a short time becomes strong with mental machinery in perfect trim. Then he becomes acquainted with morphine for the first time. He may go months before he thinks of it again when the same tired feeling makes him use it again without any thought of danger. Again he gets the rapid relief; again he experiences the wonderful euphoria that morphine brings. Thus he dallies with the drug for a year or more. At the end of this time he still has no thought of danger. He is taking it very much oftener than he did at first but he has a good excuse each time. He is still leaving it off for days without any suffering. What danger can the *e* be for him? Each dose still brings a wonderful energy, wonderful mental action and that marvelous feeling of well being. Another year and we find him taking morphine every day. This is another story; he has become a morphinist! And yet if he is moderate in its use he may have four or five years before he begins to pay the penalty. His best friends, even his wife, during this stage, may not know of his habit. But there comes a time when he begins to show all the symptoms belonging to a morphinist.

This time comes much sooner to those who use the needle than those who use it by mouth and there are certain neurotic neurasthenic natures that run a very rapid course in becoming a morphinist. Some in six months time can bring on all the most pronounced symptoms.

Let us consider the symptoms of the confirmed morphine user. The morphine must be taken every day, almost at the hour called for; there is no feeling of well being or euphoria now. The dose is taken just to maintain a physical and mental equilibrium because any attempt to stop brings on the most horrible suffering. In the early morning we find him shaking and trembling until he gets his first dose. It is impossible for him to do anything until he gets this. As the day advances and he gets dose after dose, he becomes nearer a normal man, so that by afternoon and night he is more capable of doing his work.

The physical change brought about may not be so great. I do not think there are any permanent or structural changes in the organs of the body and the morphinist seems to have a special protection from almost all diseases. In the majority of cases the morphinist is thin; his skin is a pasty white color; the eyes are dull; the pupils contracted and the whites a muddy blue. The total effect is that of one not entirely awake. These changes are brought about by the morphine toxæmia, and this is produced by its effects on the secretions and excretions of the body.

With the exception of the perspiration, there is not a single one of these that morphine does not check, and it is the toxæmia produced by this, that is the cause of all the changes that have been brought about by the drug.

The moral and mental changes that are brought about in the morphinist are probably greater than the physical ones. Procrastination now is the key note of his character. "He will not do today what he can put off 'till tomorrow," so we find him neglecting duties. He is slow and careless about answering letters. He is not as careful as he formerly was about meeting his obligations. He is careless about his dress and apt to neglect his social duties along with the others. Yet I would not maintain, as some writers do, that the morphinist is necessarily *amoral* (utterly lost to moral ideas).

There are a few who are, but I have known others who were as high-toned as any people I ever knew. Probably all morphinists will lie about their habits, and this is probably caused by the ease with which the habit is hidden at the beginning.

The mentality of the morphinist is not

always seriously impaired, as evidenced by the fact that Coleridge gave the world much of his best writings while under the influence of laudanum; to-wit, "The Ancient Mariner" &c. It is probable, however, that the world lost more from the paralyzing effect it had upon him during the latter years of his life.

DeQuincy turned his misfortunes to account by publishing his "Confessions of an English Opium Eater." He is probably better known by this work than anything else he wrote. Both of these writers claim to have freed themselves from their pernicious habits. We doubt, however, the truth of their statements in this respect.

DeQuincy states that many of the brightest and most intellectual men of his day were opium users, and probably since that time habits have been steadily on the increase both in England and America. Among these brilliant *habitués* we know Robert Hall, the noted preacher, and William Wilberforce, who stopped England's slave trade in England; and in America, we also know of the eccentric and satirical John Randolph of Roanoke.

Morphinism, therefore, shows no respect for creed or nationality. All classes of society are represented among its *habitués*. We have often noticed, however, that heredity influence plays a very significant role in the development and formation of the habit. In other words, those of inherited neuropathic tendency, which means, in common parlance, lowered nerve force, are easy victims of the habit. The Biblical statement "that the sins of the fathers are visited down upon the third and fourth generations" is very true in respect to our physical ills and weaknesses. Our progenitors are, therefore, responsible, to a degree at least, for the use of opium and its derivatives.

"Morphine daily incapacitates the noble, busy physician, defiles the sacred desk, sullies the ermine of the bench, ruthlessly enters every profession, and fastens its terrible and merciless fangs upon every class of people."

No station in life is exempt from the baneful influences of this steadily growing evil. All classes contribute their quota to the insatiable army, which, as without a leader invariably meet the same fate unless rescued by such of the medical profession who have given the subject sufficient attention to recognize the truly charitable services that can be rendered in such cases and who do not necessarily consider the substantial financial returns accruing therefrom."

Analysis of Cases.

I will make an analysis of the last 121

cases I have treated; of these 89 were men, and 32 were women. They were of all ages, from 20 to 75 years, but the vast majority about middle life, between 35 and 50. The time of addiction,—none were less than five years, some as high as thirty years of use, while the majority had been using it 12 or 15 years. Of the 89 men, 45 were doctors, more than 50 per cent. Of the total number of men and women (121) 62 were doctors, druggists, members of doctor's families, trained nurses, or more than 51 per cent. connected with medicine.

1 took morphine and hyoscyne.

1 took laudanum and whiskey.

3 took cocaine alone.

5 took laudanum alone.

7 took morphine and cocaine.

17 took morphine and whiskey.

87 took morphine alone.

—
121

Of these 121 drug *habitués*, 112 used morphine, 92½ per cent., and of these, 106 used the hypodermic needle, 95 per cent. It is a very difficult thing to find out with absolute certainty why these 121 people began the use of morphine, but at least 30 of them began with some serious or painful disease and 25 had begun the whiskey habit first. It is my opinion that a much larger number had begun with the use of whiskey; therefore, physicians should be extremely careful in their use of morphine when sobering a patient up who has been on a spree.

During the four years that I have known most of these 121 *habitués* there have been 13 deaths. One from pellagra; one from pneumonia; one from locomotor ataxia; one epileptic, whom train killed; two from tuberculosis; one from diabetes; two from heart disease; two from Bright's disease; one from toxæmia, and one from a too sudden withdrawal.

With the exception of the pellagra and pneumonia cases, all of these had their diseases before they commenced to use morphine, so that of the 13 deaths only two of them can be in any way attributed to their habits. One of these died in a hospital from the too sudden withdrawal of morphine; the other died in my sanitarium. He was over 75 years old; had taken morphine for more than 30 years and stood the withdrawal of the drug fairly well, but about ten days after the drug was entirely withdrawn, he suddenly developed symptoms of profound toxæmia and died in forty eight hours.

Out of these 121 patients, there were four or five who habitually took atropine with their morphine (I suppose from having originally started with the morphine and atropine tablet). One I remember who took as much as one-fifteenth grain of atropine

sulphate every three hours, of course taking $2\frac{1}{2}$ grains of morphine at the same time. In these cases, the combination was having a much more deleterious effect than morphine alone and it was always doubly as hard to break up the habit.

In comparing men and women, will say that in my experience, woman, the boasted bearer of pain, fails entirely when she encounters the pains of the morphine withdrawal, and she is three or four times as hard to break of the habit as is man.

The Pains and Trials of Withdrawal.

We will first consider what it is to stop morphine without medical assistance and then what medicine can do to alleviate this suffering.

When DeQuincy and Coleridge made their attempts to free themselves from the bonds of opium, it seems there was no medical knowledge then existing that could aid them one particle; if there was, neither one of them could find it. Probably there was very little medical knowledge on this subject until after 1880 when Lewenstein and Mattison wrote their articles on methods of treatment. As late as 1868, I can give this quotation from Dr. Ludlow of New York: "I am led to believe the records of fatal lesions, mechanical child-birth, cancerous affections, the stake itself, contains no greater torture than a confirmed opium-eater's experience in getting free."

Let us see now, what DeQuincy would have suffered without our present knowledge, if he had freed himself entirely from laudanum. He tells us himself of dropping from 320 grains of crude opium to 40 grains *per diem* with but little discomfort. Dr. Jennings, of Paris, speaks of a physiological limit, that is, a certain amount of morphine (or opiates) which everybody's system will take up and utilize, and any amount beyond this is a waste of the drug, because it is thrown off by the system without being used.

He places this physiological limit at 12 centigrammes, or a little less than 2 grains per day. I think Dr. Jennings makes the error of making everyone's physiological limit the same, and then makes the limit too small for the majority of patients. I am inclined myself to place this limit with the average patient at three or four grains *per diem*. But now we understand why DeQuincy was able to make this large reduction almost without suffering. The first effect of any considerable reduction is the most profound sleep. This may last continuously almost twenty-four hours. After this, sleep will become less and less in soundness and amount each night. Let us suppose that twenty-four hours after his

sleep that Mr. DeQuincy leaves off his wonted morning dose. He feels a constant propensity to *yawn, gape and stretch*, together with languor and general uneasiness. As the hours pass (without the accustomed dose) shudders run through the frame with alternate fever heats and icy chills, hot and cold sweats, especially along the spine, while a dull incessant ache pervades the bones. Then follows a host of indescribable sensations as of burnings, tinglings and twitchings, seeming to run along just beneath the surface of the skin over the whole body. These are the symptoms of a dose delayed ten or twelve hours. Let us suppose that Mr. DeQuincy's courage has not failed him, that he has continued to fall from 40 grains a day until he gets down to a grain or two a day, that he has even taken 30 or 40 days to do so, and we find him with these symptoms. He has not slept "one wink" for many days; he has a severe diarrhœa, so bilious that it burns the lower bowel in an almost unbearable way as it passes; he is vomiting almost everything he eats; his stomach and bowels are so relaxed that there is an enormous amount of flatulence. This gas is pressing on the already enfeebled heart, and causing colicky pains, sometimes very severe. He has caught a severe cold, beginning in the nose and going down into the lungs. (It is the rarest thing in the world for the morphine habitue to "take cold" while using the drug). He is sneezing, sneezing all the time. (Note—Sneezing is so certain a symptom of this stage of "coming off" that during treatment, if a patient does not exhibit it at this time, you may know he is getting morphine "on the side.") He is in a constant and profuse perspiration. His heart is so feeble that he cannot take a step without panting for breath. And this is not the only trouble from the heart; it is not strong enough to send the blood all over the body so that the extremities suffer, *i. e.*, the brain and the legs. In the legs, he has the continuous cry of the tissues for more blood; this is felt in constant nagging pains, especially in the calves. (This is not to be confused with sciatica, which so often follows the withdrawal of the opiate). In the brain, due to absolute sleeplessness, and deficient blood, he suffers with complete inertia; he cannot read, for he has no power of attention; he cannot think; he frequently cannot recall the name of his nearest neighbor. There is a most general wretchedness; time seems to be interminable; he suffers from extreme restlessness, a desire to be moving every second, and yet too feeble to take a single step. If Mr. DeQuincy's courage keeps up and he *lives* he will drop the last one-half grain of opium. Then every symptom

mentioned above will increase in severity and it will be a week before a single one of them begins to amend. The nausea and vomiting will gradually stop; the diarrhœa will check, and other symptoms slowly improve. Sleep will be the last thing to become normal. Thirty days after the last dose of opium, Mr. DeQuincey will have improved very much in his personal appearance. He will have fattened twenty pounds or more. His eyes will be bright; his complexion will be as clear as a baby's. This is a wonderful cell regeneration, everywhere except in the brain and nervous tissue. Perhaps it is the shock from loss of sleep, but he is still suffering with mental inertia; he cannot apply himself; he still has an aversion to reading and any continuous employment seems utterly impossible. This may last several months.

In those days it was not uncommon for men in desperation to try to give up their habit and die in the attempt. It is probable that at least one third died in trying to give up opium. Let us see now what we can do to prevent this suffering and death.

It is easily seen that it is impossible for a patient to go through anything like this, and continue his ordinary work, go through the ordinary cares of business and family life; therefore his placing himself in a sanitarium seems to be an absolute necessity. The kind of sanitarium, according to my view, is one with as much freedom as is compatible with the patient's cure. I have no barred windows, no locked doors, and as soon as I get the patient off of morphine, I place him on his honor and let him go about by himself. It is not often that I am deceived. As to the medical treatment, there are some as Dr. McBride, of England, who believe in large doses of the bromides. This treatment consists of giving, from the commencement of the withdrawal, two or three hundred grains of bromide of soda per day until by the time the withdrawal is complete, the patient is thoroughly saturated with the bromide. I have had but little experience with this. There are many others who believe in hyoscine treatment with rapid withdrawal. I have had but little experience with this treatment, but many accounts of it have appeared in the recent medical journals.

Treatment of Morphinism.

The successful treatment of the morphine habit resolves itself largely into the problem of treating the individual primarily and the habit is a secondary consideration. We have come to the conclusion, after careful and painstaking study of the experience of others as well as our own personal work in the management of a sanitarium for habit

cases, that the gradual reduction plan of treatment is the most successful in restoring the average drug habitue to a state of normal health.

We desire to say, however, in the beginning of a brief resume of our plan of treatment that there is no "royal road" to the cure of the morphine habit, but each case presents its problems for study and no one plan of treatment is universally successful.

My own method of treatment is this, and by it I expect to withdraw the morphine, in an ordinary patient, entirely within two weeks regardless of the amount he is taking. After waiting 24 or 36 hours so that the patient will become accustomed to his surroundings, I ask the patient to give me all of his morphine, and then begin what I think is very important,—elimination by the bowels. Calomel and C. C. pills at bedtime, with two ounces of castor oil in the morning. I prefer the castor oil, but if the patient is unable to take it, I then use any of the salines. I defer the morning dose of morphine until his bowels begin to move freely. All during the rest of the treatment his bowels are kept freely open. In regard to the morphine:—While I am reducing it I give it at regular intervals, four times a day: at 7:30 a. m., at midday, at 5 p. m., and 8:30 at night. The patient has some difficulty at first of waiting for these hours, but most of them become accustomed to it in a few days. I always use the hypodermic needle in giving the morphine, because it is the only way of keeping the patient from knowing the amount he is getting. It matters not the amount the patient is taking, I expect to get him down to his "physiological limit" in about three days and then to stop the morphine entirely in nine days more.

After the morphine is stopped, strychnine in decreasing doses is given for three days more, when the needle is stopped entirely. Let us see now what we have to look out for while the patient is "coming off." First, a heart that is weak from the loss of a powerful stimulant that has been used for years. Second, stomach and bowels that are fixing to run "amuck." Third, insomnia. Fourth, pains, all sorts of pains. For heart and intestinal tract, I use a tonic, taken every two hours while awake, containing tincture of capsicum, compound tincture of gentian, tincture belladonna, tincture of nuxvomica and compound tincture of cinchona. If the heart needs any further stimulation, I use tincture digitalis by the mouth or sparteine sulphate, 1 grain doses hypodermically. If there is diarrhœa, I use enough bismuth or tincture catechu to keep it under control. For the excessive acidity of the stomach, I use bicarbonate of soda *ad libitum*. For

the flatulence, I use asafoetida. For insomnia, I use veronal sodium, trioval of sulphonal, avoiding religiously any preparation of chloral, for as Dr. Crothers has pointed out, these are invariably followed by increased craving for morphine.

I stop all hypnotics at the earliest possible moment, advising the patient to spend some sleepless nights rather than keep them up very long. For the pains I occasionally use acetanilid guarded with caffeine, but my chief reliance is the hot bath, Russian or Turkish, or just the ordinary hot bath, just as hot as the patient can stand. In the worst stages while in the hot bath, the patient is entirely easy, and remains so for half an hour afterwards. If the pains are very worrying, there is no reason why the patient should not use the hot bath every hour or so until the pains are stopped. I also use the various forms of electricity and the electric hot box for the pains and to allay nervousness.

Thus in two weeks, with the treatment given above, I have taken the drug away from the patient almost without pain or suffering. But the fight is not over yet. The patients chief troubles now are insomnia and both mental and physical inertia, and I try to make them stay with me at least six weeks longer. I continue the tonics for several weeks, look after his diet carefully and gradually get him to taking exercise. There is a wonderful regeneration of cells everywhere except in the nervous tissues and I do not like him to go home until these are partially restored.

It takes time for the functions of the body to adjust themselves to the change incident to the withdrawal of the morphine. It also takes time to re-educate the will power and self control which are necessarily much below par in chronic morphine cases.

The rehabilitation of the patient from every standpoint is a *sin qua non* to a satisfactory cure. We therefore have no patience whatever with the so called "three day cure" for the morphine habit. We believe the longer the patient is kept under the immediate attention of the physician and sanitarium environment the more certain is he to obtain a permanent cure.

We advocate sanitarium treatment, believing strongly that this class of patients should be under close surveillance all the time and every symptom carefully watched from time to time.

"The tissues of the life be
We weave with colors all our own
'Till in the fields of destiny
We reap as we have sown."

Water Compared with Other Agencies in the Treatment of Typhoid Fever.¹

By C. A. Shore, M.D., Director State Laboratory
of Hygiene, Raleigh, N. C.

When we attempt to speak of the prevalence of typhoid fever we realize at once that it has all been said before, our minds have become accustomed to it and no impression is made. But if we had had no typhoid fever in North Carolina for fifty years until the present year, the cases which we now have, with no particular epidemic, would fill our minds with fear and horror. Many would flee to other climes as we remember they did from yellow fever in New Orleans, Memphis and Jacksonville. But now we are unconcerned until we or our families are attacked. There is nothing remarkable about this; it is a law of the human mind to fear only the new and the unknown, but that should not be and is not the viewpoint of the physician, and even the slightest advance in the knowledge of such a disease is of importance to us.

During the last few years facts of great importance concerning the epidemiology of this disease have become established, chiefly by the work of a chain of laboratories established by Robert Koch in the Rhine provinces of Germany, and since confirmed by many workers, particularly by our own Public Health and Marine Hospital Service. The chief centers of typhoid fever in Germany were in conquered Alsace-Lorraine, and possibly the newly established laboratories were given additional support and power because, for political reasons, it was necessary to control the typhoid fever in these fortress towns. I doubt if the disease was more prevalent in Alsace Lorraine than it is in North Carolina. Accurate statistics are of course wanting with us, but we know it is prevalent and we have a very bad reputation over the rest of the United States. Whether this is altogether deserved or not I do not know.

The two great discoveries of these German workers have changed our entire conception of the transmission of typhoid fever. These discoveries were, first, that the number of mild and often unrecognized cases greatly outnumbered the severe cases with classical symptoms. In one village where seven cases were reported, it was found by bacteriological study of the blood and excreta that there were in reality 64 cases, most of which were in children.

The second great discovery was that many persons who have recovered from attacks of typhoid fever—sometimes so light

¹Read before the Morehead City meeting of the North Carolina Medical Society.

as to be unrecognized—continue to harbor typhoid bacilli and to excrete them in their urine and feces for an indefinite time. The problem of controlling outbreaks of the disease at once became more complicated and more difficult. The laboratories in Germany were given powers of control which would scarcely be granted in this country. A wide spread examination was made and every case of the disease was taken to a hospital unless certain regulations were adopted in the home, which on account of the expense made admission to the hospital practically compulsory. After convalescence the patient was not discharged until his excreta were free from typhoid bacteria. If, however, they were still present ten weeks after recovery the law would not permit a longer detention, but the patient was discharged with careful instruction about the sterilization of his excreta. The result has been a gradual but constant reduction of cases in this region.

I have given this brief description because with us the laity and the greater part of the medical profession still regard typhoid fever as chiefly water borne. Almost daily I hear a history on this order: "There was one case of typhoid fever in a certain family and ten days later a second and now there are others, and therefore we suspect the well of being contaminated." By this time the well is probably contaminated if it is an open-top bucket well and if the members of the family have come from the sick room directly to the well and have handled the bucket and chain. But if the well is contaminated so probably are the dishes on the table and the food in the kitchen, so that only the immune members of the family escape an attack. Meanwhile no instruction has been given about the danger of direct contagion or the disposal of the excreta which may be thrown on the ground or into an open closet where the flies can get a load of bacteria to carry into the open windows of the neighbor's kitchen. When the neighbor is stricken down he remembers that last spring he drank out of the well where the first case occurred. The well is then closed up and a second one dug which in a few weeks is as dirty as the first.

Now I do not mean to intimate that typhoid fever may not be water borne. On the contrary, most sudden and widespread epidemics in towns are so caused, but these on the whole furnish a small part of the cases we see in our daily practice. We should not therefore relax our care for the purity of the water supply. Every water company should be compelled by daily care to have its water in such a condition that the carriage of bacteria of human origin is impossible, but more important than this

should be the duty of every health officer and every physician to teach the contagiousness of typhoid fever, and in particular to attend to the sterilization of all excreta from the patient, the urine as well as the feces. Also the sale of milk from any home in which there is a case of typhoid fever should be strictly forbidden.

We are not going to get rid of our typhoid fever at once or by any one simple method. An installation of sanitary water supplies, public and domestic, will help, but it is by no means the most important measure; a general knowledge of the danger of direct contagion and particularly the danger in excreta is far more important. I believe in this connection that the teaching of sanitation in rural districts by the Hookworm Commission is going to bear good fruit, and I also believe that widespread inoculation with typhoid vaccine will have a great influence in checking the disease, but let us not be content in using one of the means of control but all that are possible.

Our Profession.*

By J. T. Burrus, M.D., High Point, N. C.

Medical men who meet in the forum of medical societies and engage in scientific discussions and interchange of clinical experience are thereby better equipped for the discharge of the grave and responsible duties of their high calling. Under our republican form of government, free press, freedom of speech and act in religion, the legal profession by their association in legislative bodies and in litigations have presumed the masses of the people to become acquainted with the fundamentals of all laws and professions, knowledge of the medical profession until recent years being confined almost exclusively to its own members.

The field of scientific knowledge of the medical profession lies far out beyond the acquaintance of the great masses of the people, even of the most advanced civilization. And herein lies one of the greatest hindrances we have to encounter in our efforts toward the betterment of the general health conditions among the people.

The mutual relation of the profession and the masses brings a mutual obligation and there is an evergrowing demand for a better understanding between them. The medical profession exists not for its own sake, but for the common good of the people. The sufferings and needs of humanity call it into existence. The relation, therefore, between the medical profession and the public is a very important one,—there are

*Read before the recent meeting of the North Carolina Medical Society at Moorehead City.

so many things that should and must be explained to the masses by the profession before it can do its greatest amount of good. Like all worthy professions, that of medicine has its peculiar code of ethics, and the reputable physician who is worthy of public confidence and patronage bases his career as a clinician upon what the profession believes to be a moral obligation to humanity, which it seeks to serve. The doctor in no small way is a public man, and therefore a public servant. As guardians of the health and lives of the people it is but just that the profession stand for everything that is right and uplifting to the community. I believe that an intelligent public does know that the true profession stands for the highest ideals of life, and the truest moral standard among the people.

The ethical demands of the public upon our profession are fully justified. The close vital contact of the physician with the deepest and most sacred relation of life, a contact of which he is the master in charge, lays upon him the greatest moral obligation to the welfare of the race at large. To him is committed the most sacred secrets of private life, both of the individual and the home. Indeed his close and vital contact with the masses in the greatest facts of life render him an important factor in the common welfare of our civilization. The humbug and the quack are very much in evidence everywhere, and the serious fact is they are nowhere so well protected and so well enabled to do their mischievous work as they are under the cover of a profession that legitimately assumes to care for the health and welfare of the people. Here, because of the lack of correct information and the helplessness of the masses, is found the paradise of the quack, feeding like a vampire upon the lives of the suffering and afflicted.

We must in all serious honesty guard with jealous care the sacred responsibility committed to our hands and by continued search into the realm of sacred truth and by a constant dissemination of scientific principles, drive the false pretender and quack, the parasitic fads of the day, from the field and deliver suffering humanity from their ravages.

The profession has been subject to all kinds of indignities by the charlatan and patent medicine pretenders. These vampires that have sucked the blood of suffering humanity have grown arrogant and assumed for themselves all the virtues and wisdom of the age. Too often they arouse the passions of the ignorant and blind them to their real condition of health, and lead them away from their only hope of recovery. However pious may be their preten-

sions they are but murderers of confiding and helpless people and the government should have the moral courage not to afford them the protection of the law. The people who encourage them commit a crime against the race.

The people who would enter the profession of medicine need to be impressed more fully with the importance and sacredness of the profession that enters so vitally into the common health and welfare of the country. Furthermore, the public should learn that none but the high grade, moral, well educated, with the highest ideals, enter into the profession of medicine. There is a righteous demand for wise and rigid legislation throughout the nation, and we should secure legislation making the examinations more rigid than they are now.

There should be uniformity of action among all the States. The higher the standard and the more rigid the demands made by the laws of the country, the better the protection of the people, and the worthier will be the men who shall constitute the profession. No practitioner worthy of the privilege of a standing in the profession will join the calamity howl from the ranks of the false pretenders who extract their money at the price of blood when such necessary, such sadly needed, and such long delayed legislation is attempted. The protection of the profession by legislation is even a greater protection to the people. I venture to assume that in a very few years the people will demand such legislation as will permit none but the honest, moral, and well equipped doctors to practice the healing art. And in case of immorality and dishonorable conduct they will demand the legislation that will disqualify the offender and revoke the license that gave him recognition in the profession.

There is no creature with any pretensions of respectability so low in the estimation of any honorable and honest man as the man who traffics in the ills and affections of a fellowman, or who withholds any remedy or agent (from the world) that might alleviate suffering humanity or save human life.

Under the advancement of enlightenment of the masses in matters of medical science in the future this long tolerated abuse—quackery, will disappear, as the cruel customs of society are disappearing before the advancement of the high civilization and enlightenment of today. There is advancement all along the line, but there remains much to be accomplished in bringing about the full co-operation and confidence that must exist between the profession and the people.

Too often is it the case that the very ones

most sadly imposed upon join hands with the quack and help him fight against the advancement that true medical science is striving to accomplish for the people. *

No profession has made such rapid progress within the last century as that of medicine. We are not discouraged when we find that it has been a constant battle in every country and in every age.

The advancing light of truth dispels the darkness.

"Truth, on which depends our main concern,
That 'tis our shame and misery not to learn,
Shine by the side of every path we tread,
With such a mistre he who runs may read."

When we come to the full-grown day of scientific knowledge and the public more fully understands the science of medicine and the healing art, and superstition is buried in oblivion, then will the quack and the fake and the numerous fads which infest the land with their hurtful influence, take their flight. Then reason and common sense will reign supreme. With the dawning of the day of true scientific knowledge and the application of real scientific methods there comes a charming story of progress, as step by step the ladder is climbed and medical science reaches the heights of the present day achievements as long sought for its many victories.

Standing as we do today in the dawn of a new century and the most advanced light in the scientific world that humanity has ever enjoyed, one fact is evident; the century marks a growing disposition on the part of the medical world to prevent rather than to cure. The biologist and the other laboratory workers are pointing out the causes and modes of transmission of disease and the medical profession is to look to the prevention of these causes. This phase of our work is bringing the physicians more and more in contact with each other and thus is becoming a co-operative condition.

A higher standard of enlightenment of the masses must result from it. The rise of the germ theory, which began with the researches of Haller and others and which theory has been demonstrated to the fullest satisfaction of the most exacting skeptics, has marked an epoch in the knowledge and treatment of disease. To Pasteur's demonstration in fermentation and putrefaction our present knowledge of germs is based; to immortal Jenner we owe the prevention of smallpox by vaccination; to Lord Lister antiseptic surgery; to von Behring antitoxin for diphtheria, which alone has saved countless numbers of lives. From him the serum theory sprang, which has contributed largely to the amelioration of diseases and the preservation of lives. The genius of Nott and Walter Reed solved the problem of

yellow fever, which scourge costs our Southern States countless lives. The bubonic plague, which in the Middle Ages would have swept all before it, is tamed and beautifully held in check by knowledge of its cause of transmission. The great white plague, while yet unconquered, has lost much of its terror since it is now well known that sixty to seventy per cent can be cured if the cases are taken in the early stages of the disease. The handling of typhoid fever is much easier since we know better how to prevent it. This is true of all fevers. For these we are thankful, and to those who have so abundantly contributed to the unveiling of these truths, we humbly pay our most sacred reverence.

While we understand the nature of tuberculosis in a small way, the disease is yet unconquered. Measles and whooping cough are thorns in the scientific world which rage unchecked, reaping a large harvest each year. Cancer—oh! my God, how shall we ever conquer it? We must! Gonorrhea and syphilis are going hand in hand seeking whom they may devour. There are problems regarding the internal secretions which will furnish food for our most brilliant minds. We haven't explored it all, and there remains much to conquer in the fields where our greatest explorations are to be made. We are now just ready to achieve our greatest victories. The great field lies out before us almost as yet unexplored. We have but to see it and learn its boundaries from afar. Let us, therefore, move forward, with each effort to better our profession and give to suffering humanity in some way something real, living lives worthy of emulation.

Congenital Pyloric Stenosis, with Report of Case.*

By Lyle S. Booker, M.D., Durham, N. C.

There is at least one condition of the alimentary tract in early infancy which demands surgical treatment. The pediatricist must concede this one condition, and the surgeon must make good his claim. Then one more cause of infantile death will be known, and may be averted.

The first reported case of congenital pyloric stenosis was by Hirschprung, in 1888. The first successful operated case was by Lobker in 1898; since this time the many reported cases have clearly established the clinical picture and pathologic anatomy. However, there is still considerable diversity of opinion in regard to many points of pathogenesis and treatment.

*Read before the North Carolina Medical Society at Moorehead City.

This diversity is, no doubt, in a large measure due to the fact that two types of condition exist and have been referred to under the same name. One, a simple spasm of the pylorus with some hypertrophy of the pyloric ring and pyloric end of the stomach. The other, in which the spasm is associated with a true hyperplasia in the walls of the stomach and duodenum.

These two types of disease probably stand in close genetic relation to each other, but practically they are very different. One, a functional trouble and a medical disease. The other, a true organic obstruction and amenable to surgery only. Of the latter condition I beg to report the following case with courtesy to Dr. W. W. Olive, in whose practice this case occurred.

RALPH D.—The fourth child of healthy parents, was born at full term after a normal labor. He was normal at birth and weighed eight pounds. The first four weeks he was nursed at two-hour intervals and made decided gain in weight. During the fifth week he began to vomit at irregular intervals and to be constipated. The vomiting sometimes occurred immediately after feeding, but usually not for an hour or more. Sometimes several feedings were retained and then vomited together.

In spite of the very best medical and dietetic treatment the vomiting and constipation had progressively increased. The vomiting had become explosive in character, and the constipation almost absolute. Enemas and purgatives failed to produce more than small actions of bile stained mucous. No milk curds were in evidence. He acted hungry at all times and cried a great deal, apparently from hunger.

When seen in consultation, then eight weeks of age, his weight was one pound less than at birth. There were present all evidence of malnutrition and marasmus. One was struck by the prominent appearance of the epigastrium as contrasted with the retracted sunken abdomen below the umbilicus. Visible waves of peristalsis passing from left to right were easily seen. No distinct tumor could be palpated.

Examination of heart, lungs and nervous system was negative. Diagnosis of pyloric obstruction was made and operation advised. Patient admitted to Watts Hospital April 20, and after usual preparation ether was administered and abdomen opened through a right rectus incision. The pylorus and duodenum, free of all adhesions, presented a small mass about one inch in length, size of distal phalanx of index finger, smooth and of cartilaginous firmness.

A posterior gastrotomy was done after the method of Moynihan, using fine pagenstacher linen and zero catgut. Noth-

ing was done to the pylorus, as nature had nicely obliterated this opening. Abdomen closed in usual manner and child returned to bed.

Postoperative Course.—Shock was insignificant, vomiting of bile at intervals for several days, and almost immediate improvement in child's condition, both favorable signs. Rectal feeding was done for first two days, then mother's milk was begun and continued. Patient was discharged from hospital in ten days, having gained a pound in weight.

Now, two months since operation, baby weighs fifteen pounds, fat and plump, rarely eructates his milk, and bowels are moving normally.

I wish, now, to speak of the more important and accepted facts, namely, the pathology, diagnosis, prognosis, and treatment.

Pathology.—In the face of its occurrence in the very young and almost exclusively breastfed children, its origin can scarcely be considered as being due to disturbances of digestion, diseases of the mucous membranes or abnormal, chemical processes. Its etiology is therefore obscure.

A tumor is always present—a passive tumor; muscle stimulation is not necessary for its existence. This forms a mechanical stricture just the same as a strictured urethra or bile duct. There are no adhesions or products of inflammation about it. It represents an overgrowth of muscle tissue.

Microscopically the most important change is the great increase in the thickness of the circular muscular layer. To a lesser degree hyperplastic changes in the longitudinal and the connective tissue of the submucosa.

Diagnosis.—The appearance of vomiting in otherwise apparently healthy breastfed children is progressive and continuous, explosive in character, containing no bile; fails to respond to medical or dietetic treatment. The small meconiumlike stools, containing almost no fecal residue, is not consistent with any other condition.

Physical examination verifies the diagnosis. The empty retracted abdomen below the umbilicus, the full and distended epigastrium, the visible peristaltic waves and the palpable tumor are proof positive.

Prognosis.—Treated medically most cases of congenital pyloric stenosis die of starvation, and marasmus, inanition, acute gastritis, catarrhal dyspepsia or pyloric spasm are credited on the death certificate.

Some cases of moderate degree get well, many of which, however, have to be operated before reaching maturity.

Dr. Murphy's February (1913) clinic reports a case two years of age weighing only

thirteen pounds.

The estimated mortality from an expectant medical treatment is between 80 and 90 per cent. (Monier).

What, then, does surgery offer?

From the first successful operation in 1898 to 1905, a period of seven years, the operative mortality was 46.5 per cent. A high mortality, but a great improvement over the medical mortality.

Since 1905 the mortality has been lowered to less than 10 per cent.

Dr. Scudder, of Boston, reports a series of thirty-three cases operated by different surgeons in the United States, with three deaths—a mortality of 9 per cent. The same author in *Surgery, Gynecology, and Obstetrics*, September, 1910, reports a series of interesting investigations on the effect of gastroenterostomy in digestion and metabolism. Of fourteen cases studied two to five years after operation, he concludes that with all chemical evidence and clinical facts considered, the evidence is overwhelming that in these babies gastroenterostomy has no ill effect on metabolism and normal growth and development. He further proves by X ray examination that the obstructive tumor persists and that the operative stoma continued to functionate and accommodates the child in after life.

Treatment.—If, then, our pathologic picture be correct, the treatment will be obvious. No one would attempt to treat a mechanically obstructed esophagus, intestine, bile duct, or urethra medically.

The two indications for surgical treatment are:

First, to meet the emergency of starvation by overcoming the obstruction at the pylorus.

Second, to restore the continuity of the alimentary tract so that it may serve the individual through life.

The best operation to meet the demands is the posterior gastroenterostomy.

Conclusions.

1. The pathogenesis of this condition is unsettled.
2. The diagnosis is usually not difficult.
3. The indications for surgical treatment are common sense ones.

1. The operation best suited to this condition is the posterior gastroenterostomy. It is ideal in that nature has prevented the possibility of a vicious circle by obstructing the pylorus.

5. The operative mortality is low.

Technique of Stomach Examinations.*

By Matt Otey Burke, M.D., Richmond, Va.

It is generally thought that the specialist considers one part of the human body as the source of all diseases.

If there is one organ more often responsible, directly or indirectly, for derangements in other parts of the body and more frequently affected by diseases in other systems it is the stomach.

Every man, woman and child must eat in order to live. As long as they are careless as to what they eat, where they eat, and how they eat, just so long will they bear the burden of indigestion and its consequences.

The man who treats digestive troubles successfully must be able to diagnose not only the diseases of the digestive tract, but diseases in all parts of the body; he must go further than this, he must know human nature, he must study the habits of his patients, he must find out their idiosyncrasies, their manner of eating, the amount of exercise they take, their social life, their home life, their worries and their joys.

We have three classes of dyspeptics among men. First, men who are mentally overworked and physically idle; second, the men who have made fortunes and are at a loss to know how to spend them; third, men who have no time for pleasure.

Among women we have the society leaders and followers who are physical wrecks; the stenographers, teachers and shop-girls, who are overworked and poorly fed; the women who live in boarding houses with no special occupation, who are always busy and yet do nothing; and then we have the mothers and housekeepers whose duties never end.

In examining patients for diseases of the stomach we take case histories as in all other chronic diseases.

In taking the general history there are several points that cause us to think of what the trouble might be, or to what it could be due. Sex—suggests diseases peculiar to each. Age—we at once mentally tabulate the troubles of the different periods. Location suggests certain endemic conditions. Occupation plays no little part in digestive troubles. Habits could be dwelt upon at great length. Previous illness has its bearings. Present illness, when and how it begun, time of greatest discomfort, description and duration of attacks, etc.

*Read before the Southwestern Virginia Medical Society, Roanoke, June 4, 1913.

SPECIAL HISTORY OF THE DIGESTIVE TROUBLE.

Past Condition of Present Trouble.

Begun
Duration
Onset
Probable cause
Symptoms

Present Condition.

Headache:

Character
Location
Time

Vertigo

Appetite

Thirst

Abnormal Sensations:

Bloating	Pressure
Fullness	Weight
Time	

Belching:

Quantity and Character

Regurgitation:

Character and Time.

Pains:

Location
Time
Character
Duration
How Relieved.

Local Tenderness

Nausea

Vomiting:

Time
Quantity
Character
Odor and Taste.

Stools:

Character
Frequency.

General Health and Weight.

General Physical Examination.

Eyes, Ears, Nose and Mouth.

Heart
Lungs
Liver
Spleen
Abdomen
Nervous System
Kidneys and Urinary System
Rectum
Pelvis, if necessary
Examination of blood.

Examination of Mouth and Throat:

Condition, position and number of teeth
Condition of tongue and membranes of mouth
Condition of throat (tonsils, uvula and membranes).

Examination of Stomach.

Position:

Standing and Prone
Empty and Filled
Tenderness
Motor Function
Tumors
Gastric Analysis
Analysis of Feces.

Inspection.—After examining the patient in erect and semi-dorsal position, he should be placed on a table or firm couch with head toward a good light, the examiner standing at the side or foot of the table.

If the stomach is not prolapsed the inter-costal angle is full, if the stomach is prolapsed there will be a depression below the costal border extending across the abdomen, if extreme ptosis exists Harrison's sulcus will be well marked.

By distending the stomach with air, water or food a curved bulging can generally be seen corresponding to the organ, and on deep slow breathing the stomach moves with the diaphragm.

In patients with thin abdominal walls the peristaltic waves can be seen. Ventral hernia should be looked for.

Palpation.—It is often possible by palpation to determine the position of the lower border of the stomach. By pressing the hands deeply into the abdomen on either side of the spine, asking the patient to inspire as deeply as possible, and to expire suddenly, if there is a mass, such as a tumor or a cancer, the examiner will feel this mass slipping between his fingers.

Diffused sensitiveness and localized tender points can be located, floating 10th rib can be diagnosed. A movable kidney, especially on the right side, is easily palpated. A prolapsed kidney usually means a prolapsed stomach.

By pressing the fingers of the left hand down over the pyloric end of the stomach and gently tapping with fingers of the right hand we get the splash corresponding to the lower portion of the stomach, provided there is a small quantity of water in the stomach.

If the water is in the colon by massaging towards the left the splash will disappear.

Percussion is of doubtful value in outlining the borders of the stomach, though we recognize the different notes over the stomach, large and small intestines.

Auscultation is of value in diagnosing partial obstruction of the œsophagus.

By the use of the tube we remove the contents of the stomach, measure its capacity, and fill the organ with air or water, so that the outlines are fairly well marked.

Various methods of transillumination have been devised. Kemp's modification

of Lockwood's gastro diaphane seems to be the most satisfactory at present.

The x-ray picture after a bismuth meal is the only exact method known to the profession today in noting the size, shape and position of the stomach.

Of the numerous test meals, Riegels test dinner, and Elwald-Boas test breakfast are the simplest and most satisfactory. The breakfast should be removed in 50 to 60 minutes after being eaten, and we expect to get 50 to 75 c.c.'s. The dinner should be removed in four hours; from this we expect to get 150 to 200 c.c.'s.

The quantity aspirated should be measured, filtered and examined.

Macroscopic examination gives considerable information. Large pieces of bread mean poor mastication.

Considerable quantities of small particles of bread mean thorough mastication, but a deficient amount of saliva, or excessive amount of hydrochloric acid.

Free blood can be readily detected, bile and mucous are apparent when in considerable quantities.

Chemical Examination.

Free Hydrochloric Acid (Boas)

Resorcin.....	5 grms.
Cane Sugar.....	3 grms.
Alcohol.....	100 c.c.'s.
(Gunzuburg)	

Phloroglucin.....	2 grms.
Vanillin.....	1 gm.
Alcohol.....	30 grms.

Place a few drops of the reagent, and equal amount of gastric juice, in a porcelain dish, evaporate slowly, without burning, over alcohol or gas flame. If free hydrochloric acid is present, a rose red color results.

Quantitative Tests.

Topfer's method is sufficient, and the one most frequently used. In each of three breakers or test tubes (A. B. C.) place 10 c.c. of filtered gastric contents.

To A. add 2 drops of 5 per cent. alcoholic solution dimethyl amidoazobenzol; if free HCl. is present we get a cherry red color.

Titrate with 1 10 normal sodium hydrate solution until a pale yellow color appears.

The number of c.c. sodium hydrate used multiplied by ten (10) represents the acidity in each reaction, or to get the per cent. multiply this result by .00365.

Total Acidity.—To B. add 2 drops of 1% alcoholic solution of phenolphthalein, titrate with 1-10 normal sodium hydrate solution until red color results.

Combined hydrochloric acid, to C. add

2 drops 1% aqueous solution of sodium alizarin sulphate, titrate with 1-10 normal sodium hydrate until a violet color appears, multiply the number of c.c.'s of sodium hydrate solution used by 10, and subtract the result from the total acidity; this gives the combined hydrochloric acid. 1 c.c. of 1-10 normal sodium hydrate neutralizes .00365 hydrochloric acid; hence to get the percentage multiply the above results by .00365.

If hydrochloric acid is deficient or absent, then it is well to examine for propepton, pepton and pepsin.

Propepton.—To 5 c.c. of gastric filtrate add 5 c.c. saturated solution of sodium chloride, if no precipitate forms add 2 drops of acetic acid; precipitation will follow if propepton is present.

Pepton.—Filter out propepton, take 2 c.c. of the filtrate alkalize with solution of sodium hydrate, add few drops of 1% copper solution; a purple or violet red color results if pepton is present.

Pepsin.—1 gm. of the white of a hard boiled egg cut into two or more pieces dropped into a test tube containing 5 c.c. of gastric filtrate and add 2 drops dilute HCl. (if there is no HCl. in filtrate) keep at blood temperature; the albumen should disappear in from two to six hours.

It is seldom necessary to test starch digestion, though it is very easily done with Lugol's solution.

Volatile Acids.—The vapor escaping from boiling the filtrate in test tube will react upon blue litmus paper. Acetic acid is recognized by its odor.

Lactic Acid.—To 5 c.c.'s of gastric filtrate add 5 c.c.'s of ether, shake. To the ethereal extract add equal parts of dilute chloride of iron solution, to which a few drops of carbolic acid have been added to give it a blue color; if lactic acid is present a canary yellow color will be formed.

Test for Occult Blood.—To 1 c.c. of fresh tincture of guaiac add 1 c.c. of peroxide of hydrogen and a few drops of gastric filtrate; if occult blood is present, a blue line will form at junction of filtrate and test solution.

Microscopic Examination.—If there is doubt as to the source of the mucous, the microscope will decide this question. Mucous from the lungs and bronchi will contain alveolar cells and myelin drops, from the stomach it will contain columnar cells.

The microscope reveals yeast, sarcinae and Boas-Oppler, bacilli, mould, particles of tumor and fragments of gastric mucosa when they are present.

The absorptive function of the stomach can be determined by Penzoldt's method, viz.: administering iodide of potash in gelatin capsules, and testing the saliva with

starch paper and nitric acid every two minutes until the violet color is produced on the paper. Motor function may be determined by administering a plate of soup, a steak and a roll when the stomach is empty. Remove the meal in six hours, if a large quantity is found the motor function is absolutely, or if stenosis exists, relatively decreased. This meal can be repeated and removed at different intervals until we arrive at a definite conclusion as to the motor power. *The motor and secretory powers* are influenced by so many conditions, mental as well as physical, that it requires repeated examinations and careful study to arrive at a correct diagnosis.

Some Further Facts Concerning the Treatment of Malaria with Quinine.

Lathrop's Medical Herald supplementing his article which appeared in the April issue of The Charlotte Medical Journal, well says:—it is safe to say that there is nothing so deceptive in therapeutics as the fallacies of the clinical symptoms of malaria; still symptomatic diagnosis is relied upon entirely in probably ninety nine out of every hundred cases treated. Consequently, it is quite the practice to persist in the exhibition of toxic doses of quinine long after the astute clinician should be aware that he is dealing with some febrile disease other than malarial.

In malaria there is but one certain rational and practical method of diagnosis: that is by actual systematic blood search. This, however, is a procedure calling for special skill and intelligence, as well as practice, and probably, not more than one physician in a hundred is qualified to undertake the somewhat complicated biological and serological research required to make a differential diagnosis, and certainly none should attempt to do so unless he has conscientiously practiced some approved method and found it reliable, and himself competent not only to make differential white cell counts, but also to differentiate faults of technic from those of defective or deteriorated stains. Without a proper examination of the blood, no physician can possibly solve the problems of malaria; it is the *Sin qua non* of success; without it, he must fail in diagnosis, in prognosis, in prophylaxis, and in treatment. That this vital procedure is not universally relied upon is one of the anomalies of modern medicine.

In a variety of ways, a physician can be deceived by the clinical symptoms of malaria, and be led to administer quinine at a time, or in a dosage, that it should not be given; this is particularly true in cases of quartan infection where the parasite may

give rise to indefinite clinical types. Many a physician who has congratulated himself upon having aborted an attack of malaria by the administration of quinine, has awakened to the sad fact that the use of the drug has resulted in some serious complication, such as congestion and irritation of the alimentary canal; depression of the cerebral and spinal centres; circulatory weakness, caused by the depression of the heart's action; difficult or labored breathing; congestion of the brain; defects of vision; permanent deafness; delirium; stupor; convulsions; and hemoglobinuria, with its sequelae of (1) hemolytic pernicious fever, (2) hemolytic malarial cachexia, (3) malarial quinine hemolysis. These are some of the grave conditions that often supervene the administration of quinine.

The indiscriminate use or improper dosage of quinine may also result in the appearance of numerous sexual forms of the malarial parasite, instead of the usual asexual forms, and thereby place the malarial patient in a condition where he is liable to constant relapses. At the same time, it also makes him a menace to the prosperity and well being of the community in which he resides, since it increases enormously the sources from which anopheles mosquitoes become infected.

The administration of quinine is fatal to the malarial parasite only at one stage of its existence; when given at any other time it not only prolongs the febrile paroxysms, but is also liable to produce "quinine hemoglobinuria," and to convert a simple definitely intermittent fever into one that is almost continuous.

Quinine is a hemolytic, and should be recognized as such by the medical practitioner. Its use at any time tends to inhibit the oxygenating power of the blood and when given to a malarial patient it necessarily retards or altogether prevents the upbuilding of the system already depleted by the breaking down of the red blood cells.

This fact should be emphasized. According to Koch, eighty per cent. of the blood corpuscles of malarial patients contain parasites, consequently, the presence of the *plasmodia* renders four-fifths of the blood corpuscles more or less incapable of performing their physiological functions of absorbing oxygen. Since Binz, Vincent, and Semple prove that quinine has a paralyzing effect upon phagocytic activity by binding the oxygen more firmly to the hæmoglobin, it becomes obvious that the use of quinine in malaria must further lessen the power of the already depleted red corpuscles to resist hæmolysis.

The use of quinine in the treatment of

malaria is undoubtedly responsible for the fact that recovery from malarial anæmia is much slower than from the other acute anæmies; the restitution of the hæmoglobin being practically impossible under quinine treatment, and difficult to attain thereafter.

It becomes obvious from what has been said, that an effective and harmless substitute for quinine is most urgently needed by the profession and the world at large. That such has been found in Sinkina, a simple Elixir of Cuminum Sinensis, a hitherto unknown plant found growing in Yunnan, China, is clearly indicated by recent researches and clinical tests made in the governmental hospitals of Italy.

Flowers, Evans, McDonald, Camp, and others state that they find the remedy particularly adopted to malarial cases where the malady is complicated by pregnancy, as the drug has no deleterious effect upon the gravid uterus, and that it is also especially valuable in the treatment of all cases where quinine cannot be tolerated.

All reports, so far, go to show that Elixir of Cuminum Sinensis (Sinkina) has no physiological upon the brain, heart or nerves, and that it exercises no influence upon the respiration or temperature of a person in health, but that in malaria it quickly reduces the temperature, relieves the difficult or labored breathing—so often incidental to the malady—and reduces the spleen and liver to normal. Being devoid of toxic effect, and having no contraindications, it may be given with impunity to children and invalids.

Note:—A reprint of the article from which we have quoted together with a reprint of Rathrop's paper published in the April issue of the Charlotte Medical Journal can be obtained from Metropolitan Pharmacal Co., New York.

Simple Means for Enlarging a Contracted Pelvis.

Freudenthal describes a measure with which he found that the pelvis opened enough to permit the birth of a living child when preceding pregnancies had always required the sacrifice of the child. A cushion was placed under the patient's sacrum and the knees were drawn up to the middle of the abdomen during each labor pain. As the patient was unable to do this herself it was done by the attendants, one on each side, each forcibly pressing the patient's knee against the center of the abdomen, the legs turned outward. By this passive fixation of the femurs the gluteal and other muscles attached to the trochanters pulled the ilium outward on each side. This apparently stretched the ligaments of the sacro-iliac articulation, the promontory sank back-

ward and the whole pelvis became enlarged. —Berl. Klin. Woch.

Lecithin and Cholin in Tuberculosis.

Mehler and Ascher have pointed out that lecithin, as well as some of its constituents (cholin, glycerophosphoric acid), has considerable bacteriolytic power. In their investigations the authors have discovered that certain cholin salts show but little bacteriolytic power in the test tube but that when ingested in certain combinations cholin is split off and may exert bacteriotropic and bacteriolytic properties. Certain cholin salts can determine a typical tuberculin reaction in the florid tuberculosis. Cholin, to some extent, acts the same toward bacteria in general so that the action is by no means specific for tuberculosis. The authors believe that in the future we shall have a series of these substances to use as synergists. Thus already a number of combinations of lecithin with the heavy metals such as gold and copper have been suggested. —Muench. med. Woch.

Actinomycosis of the Liver in a Syphilitic Subject.

Rolleston reports the case of a rag sorter, aged 29, who contracted syphilis eight years ago and had a fall on the right side one and a half years ago. About June 1, 1912, burning pain began in the hepatic region, and about June 10 he noticed a swelling in this situation. On admission there was a firm tumor measuring 3 in. by 2½ in. below the right costal arch, fixed so that it did not move with respiration. There were old scars on the face and neck and an enormous white serpiginous scar over the front of the chest. The spleen was not palpable. The urine contained albumin. The heart and lungs were normal. As the Wassermann reaction was strongly positive and he had irregular fever, the condition being thought to be gummatous, iodides were given. The tumor softened, and on being incised on June 30 gave exit to pus containing streptothrix mycelium. On July 18 the abscess was opened up and thoroughly scraped. Shortly after this operation there was a small hematemesis which contained actinomycotic granules. The patient, who is not very tolerant to iodides has had various modifications of the latter, and has also had an autogenous streptothrix vaccine administered. The liver is much enlarged and there are the sinuses which from time to time discharged pus containing a Gram-positive streptothrix with well developed clubs; some of the mycelium resemble streptococcic chains. The urine constantly contains albumin, the temperature is irregular, and the liver has tender spots.—Proceedings of the Royal Society of Medicine.

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THE PHYSICIAN AS TEACHER.

The common title by which the physician is called it is needless to say is "Doctor," but does the layman or average professional man really consider what the name properly implies? It is to be feared not.

The word "doctor" means a learned person—a teacher—and it is with the idea of impressing upon the mind of the medical fraternity the need of those composing it taking their proper place in the world that this paper is written.

This world of ours is rapidly advancing and some lines of thought and work are becoming very powerful, while others are being left behind in the race. It is to be feared that one of the sets of men who are becoming "out of the race" is the physician.

We doctors should be leaders in many lines of life, but are not. There is nobody who would be better able to have insight into the lives of people, anatomically, hygienically, physiologically and psychologically than are we, but legislators, ministers, school teachers, engineers, and even business men have "relieved" us of a great deal of responsibility and thereby won great laurels for themselves in various lines of work, and yet in many instances their achievements have not been to the ultimate best advantage of the public.

The doctor knows that many of our diseases are due to preventable causes, and yet does very little *personally* to teach how to avoid those abnormal conditions.

Referring to another paper of the author, it may be stated that the Mosaic Law aimed to take care of the body and prevent disease. It is the duty of the physician to teach the parents and teachers how to impart various facts to the children and make clear to them the proper ways to take care of the body. It is incumbent upon him to make himself active in the health boards of the community and urge proper sanitary regulations. He should fit himself to be able to lead and not follow in the footsteps of those who should be his followers. The physician should make himself active in school matters, for so frequently the health of our growing boys and girls is much impaired right in the school room where so much of unnecessary study and application is imposed upon the immature mind. He should show how rooms should be venti-

lated, and how the black-boards, etc., ought to be arranged, but as a rule he goes calmly on his way, ignoring the fact that he is the *one* competent person to correct the evils and make suggestions for improvements. If he is not able to do these things, he deserves not the name of doctor.

As to the psychological side, enough cannot be said. Crime, disease and insanity all have their psychological aspect, and the doctor should here be in the advance of the lawyers and educators in knowledge and teach *them* as befits his position and calling.

The doctor could prevent much of the marital troubles that exist if he would teach his patients and their families what is the proper sexual relation of man to woman and what the marriage vow really implies.

There is so much that a doctor should do that it would fill a book to enumerate his duties, but suffice it to say that it is his duty to be a leader in thought and action in every community where he may be residing, and lastly, but not of least importance he should be able to help the ministers direct religious thought and be a follower more truly of the Great Physician and Teacher, for is not disease sin of some sort? Is not religion frequently the means of helping many kinds of cases? Think it over!

THE SUB-MUCOUS RESECTION AND SUBSEQUENT NASAL DEFORMITY.

The fear of a subsequent nasal deformity is sufficient, often, to deter one from attempting the operation of sub-mucous resection for the correction of septal deviations.

Slight deformity occurs, roughly, in from 5 to 10 per cent. of the cases operated; more pronounced deformity in from 1 to 2 per cent.

The character of the deformity is usually that of a depression of the nose below the lower border of the nasal bones, giving the appearance, when viewed from in front, of flattening and broadening of the nose, but never that of the well recognized saddle nose, which is due to entirely different causes.

Occasionally a nose, which prior to operation showed some inclination to one side, may develop a greater degree of inclination.

The causes of deformities following the operation are several:

(1) A pre-existing deformity, the result of a fracture of the cartilaginous septum (quadrangular cartilage) or a perforation, predisposes to an increase of the deformity.

(2) The too liberal removal of the cartilage anteriorly immediately under the fleshy nose by removing the support is prone to be

followed by depression.

(3) The too liberal removal of the anterior inferior edge of the cartilage may result in dropping of the tip of the nose, concerning which there may be some reasonable doubt.

(4) Hematoma, i.e., an effusion of blood between the two layers of the septal mucous membrane especially when located anteriorly and fairly high up, is prone to be followed by depression of the nose.

(5) Infection, even of moderate degree, following the septum operation is perhaps the most frequent cause of deformities, since in the healing process there follows more or less contraction of the tissues involved in the inflammation.

Since infection is perhaps the most frequent cause of deformities following the submucous resection of the septum, it is well to review some of its causes.

Infection of the septum is favored by

(a) Undue traumatism, for instance, bruising of the tissue with septal forceps, lacerations and unintentional perforations. Especially so when the resulting flaps are not properly replaced, before applying the dressings, thereby leaving large, raw areas.

(b) Operating the septum during acute infections of the nasal mucous membrane or during an *acute* attack of empyema of one of the accessory sinuses. In such cases the infection of the septum is aided by the use of a pack in the nose, which acts as the carrier of the infection from the outlet of the sinus to a wound of the septum.

(c) Operating a septum in the presence of acute infection of the tonsils and adenoids in which case the gauze again acts the part of a carrier, for the infection, as in the case previously mentioned.

(d) Operating a septum in the presence of enlarged tonsils and adenoids, even when not acutely infected, may result in an infection; since mouth breathing which is incidental to a pack in the nose is liable to precipitate an acute attack of tonsillitis or infected inflammation of the adenoids.

(e) Combining with the septum operation an operation upon the turbinates or other parts within the nose, thus creating a large raw surface and followed with a pack in the nose.

By observing due precautions and avoiding the dangers pointed out, there is little risk of a deformity after septum operation. Furthermore, the risk of deformity is no greater after the submucous resection than after any other operation for the correction of nasal deformities.

The submucous resection of the septum is an operation which is here to stay, because after a reasonable experience it is the easiest to perform; from the mechanical

standpoint, the most scientific; for the comfort of the patient, the least painful; from the surgical aspect, the quickest to heal, and for results, the best of any of the operations that have been attempted for the correction of septal deviations.

A GOOD SUBSTITUTE FOR HYDRASTIS.

The increasing scarcity of many of the drugs that have served useful purposes for years in the armamentum of the general practitioner lead to concern, lest the supply may cease entirely, and old reliable remedial friends may have to be abandoned.

This is notable in the instance of the sterling remedy that has been our right hand aid for years under the name of hydrastis.

Many have learned to depend upon this remedy in the past, in a host of untoward conditions of the mucous surfaces, and it is with regret that the soaring price, and oft-repeated notices of the fast diminishing supply are noted.

It may be interesting to such as have not the time for investigation, to note that there exists, in plentiful quantities, a remedy that is so nearly the prototype of this fast disappearing remedy, that it may be administered in all cases where the more expensive hydrastis is indicated.

This drug is *calumba*. The source of supply of the true drug is eastern Africa, where it grows in a wild state. This remedy is official in the U. S. P. as a tincture, and fluidextract. An infusion is also official in the B. P.

The therapeutics of this drug-remedy are practically identical with those of hydrastis. It may be given in all cases where the latter drug is the indicated remedy, and with all hopes of success. This drug should not, however, be administered in doses that are too large, not from any toxic effect that may accrue, but simply because *enough* is *sufficient*, as should be the rule in giving any remedy.

The writer has had quite an extensive experience with this remedy, and can advise any one who may wish to use it, instead of hydrastis, that most excellent results may be anticipated from its use in all cases where they would use the more expensive drug.

The tincture is the ideal remedy and may be given in doses of one or two cubic centimeters, in a little water just *at meal times*.

Exhaustive experiments have developed the fact that, given just before the meal, its best physiological effects may be expected. This is due to the fact that it has a selective action on those functions that are under the control of the pneumogastric nerve. It will increase the flow of all the fluids that

are accessory to good digestion. In this line it is more effectual, if possible, than its more popular prototype. It is almost a specific in those distressing conditions called by the name of "Americanitis," and the result of fermentive digestion.

SEDULOUS OBSERVATION AND MEDICAL ADVANCE.

It is a curious but highly pertinent truism that all the men whose names are *writ large* in the field of great medical discovery and advance are invariably of a constant and distinctly two field character. The human traits thus dominating are in the first instance an alert perceptiveness, and in the second and growing out of the above, (as more or less of a psychic corollary), a very marked mental practicality, instituting reform. In a good sense they are all doubting Thomases imbued with a just sense of some glaring defect in medical practice. They have all, through unstinting labor and close application, gradually evolved a newer and better order of things, and have been the primal inaugurators of a new dawn of enlightenment and public benefaction. Let us view concrete examples. When we consider the shining exemplars of this dominant ilk none hold a more entrenched and honorable position of pre eminence than those three men, who working more or less in parallel and sequentially have carved imperishable names in modern medical thought and practice. I speak of the Truinvirate—Hunter, Pasteur, Lister. All earnest, painstaking, and unremitting in labor they gradually sifted the chaff from the wheat and placed treatment on a basis of *proven solidarity* and not on narrow and empiric fanaticism. None realized more fully than they that "truth is truth to the end of the reckoning." No matter how revered the expounder or how firmly rooted the notion they all sought out by manifold experimentation and correlation the truth or falsity of relevant alleged medical concept. They were inductive philosophers with a penchant for humanitarian relief and only in proportion as treatment or theoretical belief and conviction was in manifest consonance with induced experimental practice was it worth anything at all to them. They were in no way deterred in their splendid work by the ever present and captious criticism of an unthinking and jealous profession, and were alike indifferent to the unwitting shafts of the enlightened laity. In season and out did these uncompromising souls gradually bring the light of a beneficent good to the yielding consciences of their fellows and amid the embroiling clouds of skepticism, rancor, ignorance, cavil and cool indifference.

What a splendid example for future generations to follow! Their vision was clear, polar and distinct. Of such are the "salt of the earth." We can do no better than imitate as far as lies within our power to do so.

SOME USEFUL HINTS ON DISINFECTION.

This is such a wide subject that it is difficult to mention even the best of the methods recommended recently by the most prominent men in our profession, and especially those which could be carried out without any difficulty from the practical standpoint.

As regards the disinfection on ships, the Clayton process may be briefly described as one in which sulphur dioxide gas, produced by combustion of sulphur in a special apparatus, is driven into the lower parts of the holds which have been previously rendered air-tight. The air is extracted from the upper parts of the hold until all the air space is permeated with the gas to the extent of 10 per cent., the extracted air being passed over the heated sulphur in the furnace. One pound of sulphur is required for every 400 cubic feet of space. Three per cent. gas in the air is fatal to rats. There is no risk of fire, and the cost is \$5.00 for every 100 tons gross register.

Dr. E. Klein: "The Bacteriological Efficiency of Hypochlorites is the Presence of Organic Matter," Public Health, p. 27, Vol. XIX, describes the bactericidal efficiency of hypochlorites in the presence of organic matter. He experimented by adding chloras to urine, letting the mixture stand for an hour and then adding the typhoid Bacillus. Owing to the previous action of the organic fluid on the disinfectant the co efficient of the latter fell to 0.8. On the other hand, if chloras be added direct to typhoid infected urine the co-efficient for chloras in a watery distribution of B. typhosus works out at 21.0.

We have to mention that Chloras, a valuable disinfecting agent at home, is not suitable for export.

A very practical question crops up nearly every day, while we are speaking of disinfection of books. We know it well, that books are the very best sprayers and supporters of tuberculosis. We are sure that there are 10,000 sufferers from the white plague in New York City who all contracted tuberculosis through books, and especially newspapers. About two weeks ago we saw a case, where a woman, never sick before and thought to be really immune against T.B.C., contracted it while handling books, which came from a distance of two hundred and fifty miles in a hermetically closed box. Two days later I discovered a large amount of T.B.C. Bacilli in her sputum and also

horrible dietu in her urine.

Now so many antiseptics and disinfectants are recommended against this misery. Formaldehyde is usually recommended, but Greco concluded that for a complete and proper disinfection of books the use of the autoclave is essential despite its drawbacks. On the other hand, Kister and Trautman find that if books of any kind are placed on a suitable stand with their leaves opened out so as to prevent more than six or eight pages sticking together and are then subjected to their process of formalin disinfection at an increased temperature in a vacuum satisfactory results are obtained. No damage could be done, the only bad effect being a tendency for the leaves to curl. This is overcome by pressure.

Table knives, forks, etc., should be disinfected by a 20 per cent. solution of carbonate of soda at a temperature of 50° C. This temperature suffices, but it will not serve in cases of infection caused by the tubercle Bacillus and it is not easy to be sure of the temperature. Below 50° C. the action is ineffective, while a higher temperature damages table knives. Therefore immersion in alcohol at 60° C. for half an hour is recommended as an easy and reliable method.

Some attention has been paid recently to disinfectants capable of killing fleas.

Saigol experimented with numerous chemicals. He found that petrol or benzine with cyllin or phenyle (in equal quantities) made up to actual contact with the fluid is necessary to kill the insects, though free use of the emulsion will drive out of a house those that escape actual contact.

Female flies are more resistant than the males. Both cyllin and phenyle emulsify petrol, but the former is preferable owing to its greater germicidal powers. The emulsion must be fresh.

A very good way of disinfecting cholera stools is to add together equal parts of fresh quicklime and water. Then dilute the slake lime so formed with three times as much water as has been previously used. Equal quantities of this mixture and cholera dejecta are thoroughly stirred together and allowed to stand for an hour, when all the vibrios are killed.

Fresh and good chlorinated lime in powder form, and in the proportion of two tablespoonfuls to a pint of cholera dejecta, is effective in twenty minutes.

Minutes of the North Carolina Medical Society at Morehead City, June 17-20, 1913.

The Society was called to order by the chairman of the local committee. The in-

vocation was delivered by the Rev. Euclid McWhorter; the address of welcome in behalf of the city was delivered by Mayor W. M. Webb; the address of welcome in behalf of Carteret County Medical Society was delivered by Dr. David S. George; the response in behalf of the Society was by Dr. Albert Anderson, of Raleigh. His response was well received and very appropriate. The president's address was well received.

The prevalent belief that the Medical Society ought to meet only in four or five of the largest cities in North Carolina is unquestionably a good idea. Morehead City has the record of having the smallest attendance of our annual meetings of any place in the State. The hotel facilities at Morehead don't seem to be capable of taking care of meetings of this kind, besides it is on the extreme section of the State. Raleigh, Greensboro, Charlotte, Asheville, and Wilmington are the proper places for the Society to meet.

Possibly it might be well enough to eliminate Asheville and Wilmington. Several prominent members of the Association suggested this, and also the elimination of entertainments. Of course at Wrightsville Beach and at Morehead entertainments are eliminated entirely. The physicians and surgeons of the State expect to pay their hotel bills when they attend these meetings, consequently it could meet in one city every year and not be a tax or embarrassing to the local for entertainment.

Board of Health.—Dr. R. H. Lewis, of Raleigh, was reappointed by Governor Craig for a term of six years on the State Board of Health, the other executive appointee being Dr. Edward J. Wood, of Wilmington, who succeeds Dr. Edwd. C. Register, of Charlotte. The medical society elected as its members Dr. A. A. Kent, of Lenoir, to succeed Dr. J. E. Ashcraft, of Monroe, and Dr. Cyrus Thompson, of Jacksonville, to succeed Dr. David T. Tayloe, of Washington.

The State Health Officers' Association elected Dr. G. M. Cooper, of Clinton, president, and Dr. W. M. Jones, of Greensboro, vice-president. Dr. W. S. Rankin, of Raleigh, is secretary-treasurer of the association. Sampson and Guilford counties, whose physicians were elected officers, employ their health officers for the full time.

Nominating Committee.—Dr. A. A. Kent, chairman; Dr. J. W. Long, secretary. First district, Dr. B. F. Halsey, Roper; second district, Dr. John G. Blount, Washington; third district, Dr. C. T. Harper, Wilmington; fourth district, Dr. N. M. Saliba, Wilson; fifth district, Dr. J. W. Halford, Lillington; sixth district, Dr. F. R. Harris,

Henderson; seventh district, Dr. I. W. W. L. Dunn, Asheville; E. Reid Russell, Faison, Charlotte; eighth district, Dr. J. W. Long, Greensboro; ninth district, Dr. A. A. Kent, Lenoir; tenth district, Dr. J. Howell Way, Waynesville.

The committee on nominations submitted the following report, which was adopted by the House of Delegates and the general session: President, Dr. James M. Parrott, Kinston; first vice president, Dr. E. T. Dickinson, Wilson; second vice-president, Dr. J. T. J. Battle, Greensboro; third vice-president, Dr. D. E. Sevier, Asheville.

One councillor was selected for each of the ten councillor districts, as follows: First district, Dr. J. L. Spruill, Columbia; second district, Dr. K. P. B. Bonner, Morehead City; third district, Dr. L. B. Evans, Clarkston; fourth district, Dr. M. M. Saliba, Wilson; fifth district, Dr. Peter John, Laurinburg; sixth district, Dr. R. L. Felts, Durham; seventh district, Dr. A. J. Crowell, Charlotte; eighth district, Dr. W. M. Jones, Greensboro; ninth district, Dr. D. J. Hill, Lexington; tenth district, Dr. M. L. Stevens, Asheville. On organization the board of councillors elected Dr. M. L. Stevens chairman, and Dr. K. P. B. Bonner secretary.

Dr. John R. Irwin, of Charlotte, was elected orator, Dr. A. S. Pendleton, of Raleigh, essayist, and Dr. David S. George, of Marshallburg, leader in debate. Dr. John A. Ferrell, of Raleigh, as secretary, and Dr. H. D. Walker, of Elizabeth City, as treasurer, were continued in office, having been elected for a term of three years.

The following committees were appointed: Scientific work, Dr. John A. Ferrell, chairman; Dr. R. A. Royster, Dr. Hubert Haywood, Jr., all of Raleigh; Public Policy and Legislation, Dr. Albert Anderson, Raleigh; Dr. L. B. McBrayer, Asheville; Dr. G. G. Thomas, Wilmington; Dr. J. M. Parrott, ex-officio, Kinston; Dr. John A. Ferrell, ex-officio, Raleigh; Committee on Publication, Dr. John A. Ferrell, Raleigh, ex-officio, chairman; Dr. Edwd C. Register, Charlotte; Dr. J. Howell Way, Waynesville; Committee on Finance, Drs. D. A. Stanton, — Chambers, High Point; Oscar McMullin, Elizabeth City; C. O. Abernethy, Raleigh; Committee on Obituaries, Drs. E. G. Moore, chairman, Elm City; A. W. Knox, Raleigh; M. L. Stevens, Asheville. Place of meeting, Raleigh, June 16, 1914. Chairman of the arrangements committee, Dr. Albert Anderson, Raleigh.

The Board of Medical Examiners will meet in Raleigh June 9, 1914.

Delegates to the American Medical Association, Drs. J. Howell Way, Waynesville; H. A. Royster, Raleigh; alternates, Drs.

W. L. Dunn, Asheville; E. Reid Russell, Asheville.

Delegates to South Carolina Medical Association, Drs. W. O. Nesbit, Charlotte; C. Banks McNairy, Lenoir; G. A. Garrison, Gastonia; Seavay Highsmith, Fayetteville; Tate Moore, Wilmington; I. M. Taylor, Morganton.

Delegates to Virginia Medical Association, Drs. Benjamin K. Hayes, Oxford; T. L. Gunn, Goldsboro; J. W. McGehee, Reidsville; H. T. Bahunson, Winston Salem; D. A. Stanton, High Point.

Committee on Society Records, Drs. J. A. Ferrell, chairman, Raleigh; I. H. Manning, Chapel Hill; J. Howell Way, Waynesville.

Committee on Medical Defense, Drs. J. M. Parrott, chairman; W. S. Rankin, G. W. Pressly, M. H. Fletcher, H. A. Royster.

Committee on Society Members Who Have Not Been Properly Recorded, Drs. John A. Ferrell, chairman; D. J. Hill, A. W. Knox, M. L. Stevens, A. J. Crowell, E. G. Moore, Oscar McMullin.

Dr. James M. Parrott, President.

From the day of his passing the North Carolina State Board of Medical Examiners in 1895, with an average grade in all the examinations of 96, to the present hour, the medical profession of the Old North State has had within its ranks no more faithful adherent, or the State Medical Society of North Carolina a more earnest and loyal supporter, than Dr. James M. Parrott, of Kinston, N. C., who by the unanimous vote of the Society at the recent Morehead City session becomes its President for the ensuing year.

Possessing an agreeable personality, attractive manners, finely educated, well versed in the best traditions and sentiments of the medical profession, firmly entrenched in the esteem of his fellow practitioners, and with a large and ever increasing local and consulting clientele, he comes to the highest official honor the State Medical Society may bestow with a prestige that almost necessarily assures at his hands a brilliant administration. His constant and regular attendance upon the Society's annual meetings, his valued contributions, alike in essay and debate, his well known active concern in every affair relating to the betterment of the profession, his efficient service in the various minor positions as well as six years laborious and successful endeavor as a member of the State Medical Examining Board, all combine to furnish him a first hand definite knowledge of the North Carolina physician and his needs. Associated with these admirable personal environs, Dr. Parrott will bring to his responsible duties

untiring energy and boundless enthusiasm with the result that the Society will contribute in greater degree than ever before to the helpful uplift of the individual doctor of medicine in North Carolina, and the Society's record for the year will be one of unparalleled progress and prosperity. We congratulate the Society on its happy selection of its President, and in turn we cordially commend their choice to the physicians of the State, whether members of the organized medical profession or no, as a gentleman, a physician and a citizen whom all Carolinians will regard as eminently fitted to assume the toga of leadership of a great profession in a great State.

Editorial News Items.

Meriwether Hospital at Asheville, for some years the private hospital of the late Dr. Frank T. Meriwether, will be conducted by the estate as a public hospital for the city of Asheville and surrounding country, and will be open to all regular physicians.

Dr. B. L. Jones, of Raleigh, has been appointed House Physician to the Long Island City Hospital of New York and assumed the duties of the position July 1st.

Dr. C. Adrian Julian, of Thomasville, for 20 years the Physician-in-Chief to the Baptist State Orphanage at that place, has tendered his resignation on account of inability to attend to its duties and those of a large general and consulting practice. The Board accepted the resignation with regret, adopting resolutions expressive of appreciation of his long and satisfactory service. Dr. J. E. Hobgood was elected his successor.

Anson Sanitarium at Wadesboro, N. C.

Ground has been broken by the contractors, J. W. Stout & Co., of Sanford, for the Anson County Sanitarium and the contract calls for the completion of the building by November 15. The structure is to be of red pressed brick, fitted with all modern conveniences and will cost in round numbers \$16,000. The lot for the building was donated by State Senator E. E. Little and he has also made a handsome contribution to the building fund. Many citizens in the county, among them Col. John T. Patrick, have contributed liberally to the cause. Dr. R. D. Ross is on the Board of Trustees.

South Carolina Medical College.

The commencement exercises of the Medical College of South Carolina took place

June 2nd at the Academy of Music when 30 young men received diplomas in medicine and 17 in pharmacy and the interesting program which had been arranged for the occasion was closed with a formal and brief ceremony of turning over the institution from its individual corporate existence by Maj. Theodore G. Barker of the Board of Trustees to the Governor of South Carolina, representing the new Board of Trustees, elected by the legislature.

The address of the dean, Dr. Robert Wilson, review the work of the college and the prospects of the future, as a State institution, with reference to the recent successful campaign in raising more than \$75,000 for a new college building, to be erected on Lucas street opposite the Roper hospital.

Francis H. Weston, of Columbia, delivered the annual address, speaking ably and eloquently to the graduates.

Dr. C. W. Kollock delivered the cup for first honor in medicine to Dr. H. P. Wagener; N. B. Barnwell medal for first honor in pharmacy to C. J. Noble, and Joseph B. Hyde, Jr., the medal of the State Pharmaceutical Association for the best practical work to P. C. Halford. Diplomas went to the following graduates:

In Medicine—C. C. Ariall, St. George; J. M. Barnwell, Adams Run; M. W. Beach, Taxahaw; J. R. Belk, Taxahaw; W. C. Boyleston, Springfield; H. H. Blake, Savannah, Ga.; J. H. Brodie, Springfield; J. R. Claussen, Claussen; J. W. DuPre, Owings; Eugene Graham, Morrisville; R. M. Graham, Cowards; A. D. Gregg, Florence; J. P. Harrison, Greenville; J. M. Hobson, Pendleton; J. P. Jewell, Piedmont; P. J. Johnston, St. George; W. S. Judy, St. George; J. L. Marshall, Morrisville; C. D. Mills, Newberry; J. D. Moorehead, Columbia; A. T. Nelly, Rock Hill; H. M. Parker, Jr., Charleston; C. M. Scott, Kingstree; H. B. Senn, Newberry; W. C. Stone, Leesville; H. P. Wagener, Charleston; C. A. West, Camden; S. E. Wheeler, Parksville; A. M. Wilcox, Marion; I. R. Wilson, Charleston.

In Pharmacy—E. C. Blackwell, Union; A. Brock, Charlotte, N. C.; W. J. Bryant, Orangeburg; J. A. Gilberson, Charleston; P. C. Halford, Blackville; J. H. Hardwick, Conway; J. H. Hutchinson, Rock Hill; W. S. Nelson, Manning; C. J. Noble, Graham; W. L. Rogers, Fork; J. H. Sanders, Charleston; B. T. Smith, Bowman; C. L. Stover, Charleston; H. W. White, Marion; A. A. Wilkinson, Abbeville; T. C. Holman, Cameron; J. J. Morris, Lake City.

The first nine graduates in medicine have the refusal of positions as internes at the Roper Hospital and the St. Francis Xavier Infirmary, being as follows: Drs. Wagener,

Barnwell, Mills, Hobson, Eugene Graham, Wilson, Beach, Senn and Judy.

Robert Simonton Young.

Confirmation of the well worn adage that "Death Loves a Shining Mark" was strikingly furnished by the sudden and tragic death of this knightly man and superb physician near his home, Concord, N. C., on Wednesday, June 18th, 1913.

Dr. Young had started on that morning, in his automobile, accompanied by his faithful wife and two friends, to Salisbury to consult his friend, Dr. Jno. Whitehead, about a condition which had justly given him alarm—a condition which involved the heart. On reaching Landis, 10 miles from his home, just as his machine crossed Line Crossing he threw his hand to his breast and exclaimed, "It is all over" and was dead. His master had said "It is finished, the work Thou gavest me to do." With perfect calm he, the servant of his Lord, exclaimed, "It is all over." The trust which had been put into his hands had been faithfully kept, as a citizen of his town and State, as a member of his loved profession, as a devoted husband and father the record was full, true, and clean. He realized and met death unafraid as the falling of the curtain at the end of the play, as the going down of the sun at the close of day.

He was born in Cabarrus county, two miles from Concord, Sept. 28, 1861, and was 51 years of age. He was educated at Carolina Military Institute, and there was ever about him a military air and dignity coupled with a rare geniality. He graduated from the New York University of Medicine in 1881, was licensed in 1882 and located in Mecklenburg county first at Matthews, but moved to Concord in 1883 and lived there to the day of his death.

He joined the North Carolina State Medical Society in 1882 and was an ardent and prominent member to the end. He early impressed himself upon his brethren of the society as a man of high endowments and they were not slow to confer their honors upon him. In 1899 he was elected on the Board of Medical Examiners and continued to discharge the high and exacting duties of this office until 1894—a term of 4 years. In 1901 he was chosen president of the North Carolina Medical Society, and all who were present at the meeting at Wilmington (Wrightsville) in 1902 will recall with what dignity and ease he presided over that meeting.

"Bob Young" as his friends delighted to call him, was commanding and handsome in appearance, of charming personality he easily won and held the esteem of all who came in contact with him. Of broad in-

tellectuality and sound judgment he inspired the utmost confidence in his patients and few men have been more idolized by their patients or more held in esteem by their colleagues.

His death occurred while the North Carolina Medical Society was in session at Moorehead. The announcement of it softened the flow of mirth and brought genuine sorrow to his numerous friends.

[The editor of this Journal is indebted to Dr. T. E. Anderson for the preparation of the above notice of the death of Dr. Young.]

Dr. F. T. Meriwether.

Dr. F. T. Meriwether, one of the most prominent surgeons in the State and founder of the Meriwether Hospital, died at his institution in Asheville, N. C., on June 11th. He had a few days before his death undergone an operation for appendicitis. Dr. Sloan, of Cleveland, Ohio, was the surgeon who operated on him.

Dr. Meriwether was a native of Kentucky. He moved to Asheville seventeen years ago. Several years ago he founded the Meriwether Hospital, and it has only been a few months since he spent one hundred thousand dollars in rebuilding the old Meriwether institution. He was a great success as a surgeon, as manager of a large hospital, and was one of the founders of the American Gynecological Society.

Dr. Meriwether was about fifty-four years old. He graduated at the University of Louisville in 1886, and was for several years assistant surgeon in the United States Army, but was retired prior to the time he moved to Asheville. He was consulting surgeon for many railway companies and for several local hospitals. Dr. Meriwether was a member of the American Medical Association, Southern and Gynecological Association, Mississippi Valley Medical Association, Tri State, and North Carolina Societies.

In all these organizations, he has been honored with important official positions.

BOOK NOTICES.

Diseases of the Nose, Throat and Ear. For the use of Students and General Practitioners. By Francis R. Packard, M.D., Professor of Diseases of the Nose and Throat in the Philadelphia Polyclinic Hospital and College for Graduates in Medicine; Aurist to the Out-Patient Department of the Pennsylvania Hospital. Second Edition with 145 Illustrations. Philadelphia and London: J. B. Lippincott Company.

Such rapid strides have been made in the

progress of laryngology and rhinology that it has been necessary to re-write numerous portions of the original text, and in this edition an effort has been made to incorporate such advances.

The book is especially designed to meet the needs of undergraduates and those taking postgraduate work, and gives such information as is essential to help the student in his practical work, but is not burdened with theoretical knowledge. It is based on the author's years of experience as a post-graduate teacher and a hospital worker in large clinics,

The excellent illustrations, many of which have been added since the first edition, add much to the value of the book. We take pleasure in recommending this book. The price is \$3.50.

Diseases of the Ear. By Philip D. Kerri-son, M.D., Professor of Otology, New York Polyclinic Medical School and Hospital; Junior Aural Surgeon to the Manhattan Eye, Ear, and Throat Hospital; Aural Surgeon to the Willard Parker Hospital for Infectious Diseases, and to the Polyclinic Hospital; Member of the American Otological Society, and of the New York Otological Society, and the New York Academy of Medicine. 331 illustrations in text, and two full pages in color. The price of the book is \$5 00. Philadelphia and London: J. B. Lippincott Company.

Probably in no branch of medicine have more notable advances been achieved during the past decade than in otology, and this book is so arranged as to bring the various subjects now pertaining to this branch of medicine into a true relation with their actual and proportionate importance.

For example, labyrinthine physiology, suppurative diseases of the labyrinth, and the surgery of the labyrinth, which are usually rather briefly dealt with, are here considered in three separate chapters which occupy a very considerable section of the book. Again, the suppurative lesions of the brain and meninges are accorded far more space than is usually allotted them in text-books of otology.

In the section devoted to operative surgery, the plan of illustrating each successive step of the various operations has been adopted. This it is believed will be of special value to students of otology living at a distance from the larger medical centres, and who are therefore denied the educational advantages of large surgical clinics.

The book contains 588 pages and is well indexed. It gives me a great deal of pleasure to review it in the Journal.

The Modern Treatment of Nervous and Mental Diseases. By eminent American and British authors. Edited by William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases in the Georgetown University and in the George Washington University; Lecturer on Mental Diseases in the U. S. Army and U. S. Navy Medical School, Washington, D. C., and Smith Ely Jelliffe, A.M., M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System in the Post Graduate Medical School and Hospital; Visiting Neurologist to the City Hospital; Consulting Neurologist to the Manhattan State Hospital, New York, N. Y. Two octavo volumes, containing about 900 pages each, illustrated. Per volume, cloth, \$6.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The second volume of this unique work has made its appearance within a few weeks after the publication of the first. It deals with matters of great interest and extreme practical value, and its pictorial department is fully up to the high standard of the text. Among the many subjects discussed are the Neuralgias and Neuritides, Injuries of the Peripheral Nerves, Muscular Atrophies and Dystrophies, Headaches, Spasmodic Disorders, Epilepsies, the Meningitides, Syphilitic Diseases of the Nervous System, the Use of Salvarsan and Neosalvarsan, Cerebral Hemorrhage, Embolism and Thrombosis, Disorders of Expression, Stuttering, Diseases of the Cranial Nerves and Lesions of the Spinal Cord. Diseases of the Optic Thalamus, Midbrain and Cerebellum, Paralysis Agitans and Multiple Sclerosis, the Toxemias of Dangerous Trades and of Drugs, and the Surgery of the Brain and Spinal Cord. In these two volumes the practitioner now has, in most convenient form, the latest and best knowledge concerning a very puzzling and difficult class of cases.

Laboratory Methods with Special Reference to the Needs of the General Practitioner. By B. G. R. Williams, M.D., Member of Illinois State Medical Society, American Medical Association, etc., assisted by E. C. C. Williams, M.D., formerly Pathologist of Northern Michigan Hospital for the Insane, Traverse City, Michigan, with an introduction by Victor C. Vaughan, M.D., LL.D., Professor of Hygiene and Physiological Chemistry and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan. Second Edition. Illustrated with Forty-three Engravings.

C. V. Mosby Company, St. Louis.

Laboratory Methods is not of an encyclopedic form, nor is it a limited compend, but is especially designed for the general practitioner who desires to make, easily and inexpensively, examinations on which he may depend. It shows that many of the comparatively simple cases that are usually sent to distant cities for expert examination may be made with more satisfactory results by the practitioner. The methods have been simplified both as to apparatus and technic, but the essential factors are not left out but emphasized in such manner as to indicate their importance.

This volume is very beautifully bound and the illustrations are excellent, adding much to the value of the book. It is a book such as we take great pleasure in reviewing in the Journal. The price is \$2.50.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume I. General Medicine edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Series 1913. The Year Book Publishers, 180 N. Dearborn St., Chicago.

This volume has 404 pages and is very appropriately bound and indexed. It deals mainly with infectious diseases, diseases of the circulatory organs, diseases of the blood vessels, diseases of the blood and blood-making, diseases of the ductless glands, diseases of metabolism and urine, and diseases of the kidneys.

The present volume is one of a series of ten issued at monthly intervals and covering the entire field of medicine and surgery, each volume being complete for the year prior to its publication on the subject of which it treats. The price of this volume is \$1.50. This series is published in several volumes, thus enabling those interested in special subjects to buy only the parts they desire.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Diagnosis in the Jefferson Medical College of Philadelphia; Physician to the Jefferson

Medical College Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc., assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Volume II, June, 1913. Hernia—Surgery of the Abdomen, exclusive of Hernia—Gynecology—Diseases of the Blood. Diabetic and Metabolic Disease. Diseases of the Spleen, Thyroid Gland, Nutrition, and the Lymphatic System—Ophthalmology. Lea & Febiger, Philadelphia and New York, 1913.

This is a very valuable periodical and should be in every doctor's office.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume II. General Surgery, edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in the Northwestern University; Attending Surgeon and Chief of Staff of Mercy Hospital, Wesley Hospital, St. Joseph's Hospital and Columbus Hospital; Consulting Surgeon to Cook County Hospital and Alexian Brothers' Hospital, Chicago, Illinois. Series 1913. The Year Book Publishers, 237 S. La Salle St., Chicago.

The refinements of surgical technic have become very much more important factors in the more recent fields which surgery is attacking. Success in operating on fractures, for instance, depends enormously more on the delicacy and carefulness of the technic than does success in operating in the peritoneal cavity, and much of the evil results that have occurred in connection with the open treatment of fractures, arthroplasties and arthrotomies, are due to omissions or commissions in technical detail. (Uniformly good results can and do obtain in this class of cases when the operation is executed with a proper aseptic technic.)

This book contains 633 pages, is well indexed and illustrated. While it is published primarily for the practitioner, it is arranged in several volumes so that those interested in special subjects may be en-

abled to buy only the parts they desire.

The price is \$2.00.

The Psychoneuroses and Their Treatment by Psychotherapy. By Professor J. Dejerine, Professor of the Clinic for Nervous Diseases of the Faculty of Medicine of the University of Paris, and Dr. F. Gauckler, Ancien Interne of the Hospitals of Paris. Authorized translation by Smith Ely Jelliffe, M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System, Post Graduate Medical School and Hospital; Visiting Neurologist, City Hospital, New York. J. B. Lippincott Company, Philadelphia and London.

This book is wholly devoted to the study of the psychoneuroses and their treatment, and is divided into three parts.

The first, which is analytical, is devoted to the study of functional manifestations, that is, to the study of all the symptoms which are observed in the course of the psychoneuroses, whose exact nature we wish to ascertain.

In the second, the synthetic, the general mechanism of the foundation of the psychoneuroses, as well as their variations and nature, is set forth in a very clear manner.

In the third, which is therapeutic, are set forth the psychoneuroses proceedings and helps which are the only measures that should be used in the treatment of the psychoneuroses.

This volume, the price of which is \$4.00, contains 395 pages, and is most beautifully and appropriately bound. We take great pleasure in reviewing it in the Journal.

Heart Disease, Blood-Pressure and the Nauheim Treatment. By Louis Faugeres Bishop, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases, Fordham University, School of Medicine, New York City; Physician to the Lincoln Hospital; Late Chairman of the Section on Medicine of the New York Academy of Medicine; Member of the American Medical Association; American Therapeutic Society; New York Pathological Society; Alumni Association, St. Luke's Hospital, etc. Fourth Revised Edition. Funk & Wagnalls Company, New York and London. 1913.

In this volume, the fourth edition of Heart Disease, another chapter on "The Construction and Use of Blood Pressure Instruments" has been added. During the past few years these have come into general use.

Though the literature of cardiovascular disease has been widely extended during the last period yet the underlying principles have not changed, nor has any book appeared to replace this one in the exposition

of these principles in a simple form. The fundamental knowledge necessary for the actual treatment remains fixed. The Nauheim method is becoming more and more popular, and the principles, if not the exact technique of the treatment, are being applied all over the world.

This little book with its many illustrations presents a very attractive appearance indeed, and we take pleasure in recommending it to physicians.

Blood-Pressure, From The Clinical Standpoint. By Francis Ashley Faught, M.D., Formerly Director of the Laboratory of Clinical Medicine of the Medico-Chirurgical Hospital; Instructor in Medicine at the Medico-Chirurgical College, Philadelphia. Illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Price, \$3.00 net.

This volume contains in concise form a resume of the clinical and experimental work which has led to the present popularity of the blood pressure test. In it is presented the pith of medical literature bearing on blood-pressure studies in their relation to medicine, not only in cardio-vascular and renal conditions, but also in many diseases in which clinical observation has shown the information obtained by the sphygmomanometer to be of value.

The publishers have spared no trouble in making this book very attractive in its binding. It is well indexed and very appropriately illustrated. The book contains 281 pages.

Diet Lists of the Presbyterian Hospital, New York City. Compiled, with notes, by Herbert S. Carter, A.M., M.D., Consulting Physician to the Lincoln Hospital, Associate in Medicine at Columbia University, and Assistant Visiting Physician to the Presbyterian Hospital, New York City. 12mo of 129 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.00 net.

The Diet Lists contained in this volume were prepared primarily for use in the Presbyterian Hospital, and the comments on the different diets added subsequently.

The aim is to show a rational mean in the quantity of protein recommended which will allow a sufficient margin of safety and still be considerably below the old standards of supposed protein requirement. No hard-and-fast line has been drawn between the requirements of men and women requiring purin-free, low calcium, or salt poor diets, as the cases requiring these diets are never numerous in a hospital ward.

This volume is one that we are sure will prove very valuable to all physicians, and

we take pleasure in recommending it to them.

Diseases of The Eye. A Hand book of Ophthalmic Practice for Students and Practitioners. By G. E. DeSchweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania and Ophthalmic Surgeon to the University Hospital; Consulting Ophthalmic Surgeon to the Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia Hospital; Ophthalmologist to the Orthopædic Hospital and Infirmary for Nervous Diseases. With 360 Illustrations and Seven Chromo-lithographic Plates. Seventh Edition, Thoroughly Revised. W. B. Saunders Company, Philadelphia and London, 1913. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

In the seventh edition of this text-book its various chapters have been revised carefully and a certain amount of new matter has been incorporated. Thus, special paragraphs on the following subjects appear for the first time: Schiotz's Tonometer; Ophthalmodiaphanoscopy; Sporotrichosis of the Eyelids and Conjunctiva. Widmark's Conjunctivitis; Rosacea Keratitis; Epithelial Dystrophy of the Cornea; Marginal Degeneration of the Cornea; Blue Sclerotics; Progressive Atrophy of the Iris Layers; Exudative Retinitis (Coats' Disease); Angiomatosis Retinæ (von Hippel's Disease); Cysts of the Retina; Blindness from the Aryolarsenates; Siegrist's Method of Local Anesthesia; Simple Trephining of the Sclera (Elliot's Operation); Reese's Muscle Resection Operation; Toti's Operation (Dacryocystorhinostomia).

This volume contains 979 pages and is very neatly and appropriately bound. Presenting as it does the most important discoveries and observations of the last three years, we feel sure that it will be a help to all physicians.

Massage—Its Principles and Technic. By Mas Bohm, M. D., of Berlin, Germany. Edited, with an introduction, by Charles F. Painter, M. D., Professor of Orthopedic Surgery at Tufts Medical School, Boston. Octavo of 91 pages, with 97 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.75 net.

While there is no question but that a great part of massage can be best administered by the doctor, yet on the other hand, there is, unquestionably, massage which requires no medical knowledge whatever, but only the essentials of an understanding of anatomy, together with mechanical and manual skill.

This book is written especially for the

student who desires to assist the doctor in an intelligent manner as assistant in massage and gymnastics, as well as the doctor and the educated masseur. The technic described in it is essentially that which is employed in Hoffa's clinic.

The illustrations in this volume are very appropriate indeed, and add much to the value of the text. The book is one that we feel sure should be in every physician's office.

The Blood of the Fathers. A Play in Four Acts. By G. Frank Lydston. The River-ton Press, Chicago. McMLII.

In writing this play, the author has written one that is a plea for marriage control and regulation, a plea for matrimonial discrimination, a plea for the protection of the unborn, a plea for the sterilization of degenerates, a plea for the under-dog, a protest against corrupt and grafting police systems and police persecution of social outcasts, a plea for the salvation of the young prospective criminal, a plea for the education of the layman in matters, and more yet, it shows that, in the conflict between man the intellectual and man the animal, the animal wins, whenever and wherever primordial passion is in the saddle.

It is this that makes society a whited sepulcher. It is this that makes cowards of us all, and bids us hide behind the screen called "civilization" which society has built.

This play of four acts drives home a social lesson, the more effective because it is in dramatic form.

The Chemic Problem in Nutrition (Magnesium Infiltration). A Sketch of the Causative Factors in Disorders of Nutrition as Related to Diseases of the Nervous System. By John Aulde, M. D., Formerly Assistant Physician, Out-Patient Department, Jefferson Medical College Hospital; Demonstrator of Physical Diagnosis and Clinical Medicine, Medical-Chirurgical College; Member American Medical Association, Pennsylvania State and Philadelphia County Medical Societies; Medical Examiner Metropolitan Life Insurance Company (1892-1900); Delegate to Ninth Annual Convention for Revision United States Pharmacopœia (1890); (Author of "The Pocket Pharmacy," "Diet for Health," "Cellular Therapeutics," "Copper Arsenite and Nuclein Solution for Typhoid Fever," "Dyspepsia: Its Causation and Systemic Effects —A Study in Reconstruction Metamorphosis, Physical and Physiologic," "Nucleins: A Clinical Therapeutic Index and Guide," "Multitoxine for Tuberculosis," "Typical Tuberculosis," "Mag-

nesium Infiltration," etc.). Illustrated with four plates. Philadelphia: John Aulde, M.D.

In studying the fundamental basis underlying the development of any disease, it is necessary to obtain all possible data in order that the deductions may be warranted by the facts adduced. The author has, therefore, as a preliminary to his discussion given a cursory survey of the ground to be covered—under the head of "General Considerations" and later takes up more in detail "Disorders of Nutrition."

The several topics are conveniently arranged under appropriate headings for the purpose of developing the importance and significance of the chemic deviation designated magnesium infiltration, sufficient evidence, scientific and clinical, being presented to confirm the claims advanced.

In the chapter entitled "The Food Problem, with Dietary Studies" we see how a dietary containing magnesium in excess of the normal demands of the system gives rise to digestive derangements.

This volume contains 410 pages, is very carefully indexed and beautifully bound. The price is \$3.00.

Half Our Population Living in "Dry" Territory.

It is generally thought that Germany drinks more beer than any other nation in the world. This is a mistake. Germany comes second. The United States consumes 1,851,000,000 gallons of beer each year, which is a hundred million gallons more than Germany's consumption. Russia leads the world in its use of distilled liquors, and the United States comes second, with its consumption of 133,000,000 gallons. Although the United States is first as a beer-drinking nation and second as a consumer of distilled spirits among the nations of the world, the liquor dealers of America are having a desperate fight for the life of their traffic.

The saloon has been expelled from one-half of the population and from two thirds of the geographical area of the country. In 1868 there were 3,500,000 people living in territory where the drink traffic had been outlawed; in 1900 the number had increased to 18,000,000; in 1908, or only eight years after, the number had doubled to 36,000,000, and today there are 46,029,750 persons, or a fraction over one-half of the population of the country, living in no-license territory. In the last five years the no-license population has increased a little over 10,000,000, which is more than 10 per cent. of the total population of the nation and 30 per cent. increase in the number living in "dry" districts. Since 1868 the

population of the country has doubled, while the number of inhabitants of "dry" territory has increased over thirteenfold.—From "The Campaign Against the Saloon," by Ferdinand Cowle Iglehart, in the American Review of Reviews for July.

Abstracts of the Leading articles of the month.

Subaortic Stenosis.—Thursfield and Scott (Brit. Jour. Child. Dis.) record the autopsy findings in such a case. A boy of fourteen years, while seated at work, fell from his seat and died soon after. Seven years before this he had a loud systolic murmur heard over the whole precordia with the point of maximum intensity in the second right intercostal space. This was then supposed to be due to patency of the ventricular septum. The right side of the heart was moderately dilated, the auricular wall somewhat thickened. The left auricle was greatly hypertrophied. The left ventricle was enormously hypertrophied and considerably dilated. The aortic orifice was narrowed by a fibrous ring situated on the septum ventriculorum immediately below the undefended space and extending over the posterior aspect of the mitral aortic cusp. The diameter of this ring at its widest was less than a quarter of an inch; its edges were smooth and free from vegetations. The aortic semilunar cusps were thickened and the two coronary cusps fused into one, so that the orifice was much narrowed. Immediately above the non-coronary cusp was a thin line of fibrous thickening in the wall of the sinus of Valsalva; and at the level of the ductus arteriosus, which was closed, was a transverse line of thickening, which appeared to have produced a slight narrowing of the lumen of the aorta. In the Hunterian Lectures of 1909 Keith mentions only four hearts with this lesion. It is obvious from the descriptions given that the condition is not incompatible with good general health, at any rate when it is present only in a slight degree, and so long as there is no infection of the abnormal structure or of the valve. It affords a probable explanation of no inconsiderable number of those cases of congenital heart disease, who, without cyanosis or clubbing of the fingers and with good general development, have a loud rough systolic murmur heard at its maximum down the sternum. Such cases are not very uncommon among London school children, and are detected in the course of routine examination, not by reason of any failure of health.

The physical signs which we should ex-

pect to find in such a case are (1) evidence of an hypertrophy of the left ventricle; (2) a loud systolic murmur with its maximum intensity in the second and third intercostal spaces on the right side, and conducted down the sternum, and (3) a systolic thrill, most marked in that area. It is, however, remarkable that the thrill is recorded in only one of the four cases noted.

Pituitary Extract in Obstetrics.—Gousew (Medical Press, London) has used pituitary extract in forty-eight cases at the Bakhrushin Hospital, giving 0.75 c.c. hypodermically, and repeating the dose in only two cases. Pains began two to ten minutes after the injections, accompanied by abundant micturition. The moment of the birth of the child varied from within five minutes to eighteen hours after the injection, depending on the period of labor and the position of the presenting part. Pituitary extract stimulates pains better during the second half of pregnancy, especially at its end; it gives good and reliable results in the stage of dilatation, and acts still better in the stage of expulsion. In the absence of amniotic fluid the action is prompter and more reliable than when the membranes are intact. Chloroform anesthesia, and, to a still greater extent, hypodermic injection of morphine, inhibits the action of pituitary extract. Irregular pelvis, of course not beyond the medium degree of contraction, are not contraindications to the administration of pituitary extract, even in cases where the presenting part stands over the inlet. Pulmonary tuberculosis, diseases of the heart and kidneys, eclampsia, placenta previa (marginal), premature detachment of the placenta were not considered to contraindicate the administration of pituitary extract. On the contrary, edemas completely vanished in eight to eighteen hours, the quantity of albumin in the urine was considerably reduced, and in some cases it entirely disappeared. In the postpartum period a quicker expulsion of the placenta was noticed, and, therefore, it is better to start expressing it earlier in order to avoid undesirable delay in view of the rapid contraction. In no case was any injurious effect of pituitary extract observed on the mothers or children. After parturition the uterus is well contracted; no hemorrhages were observed except in one case of rupture of the cervix where the patient was suffering from hemophilia. In case of atonic hemorrhages pituitary extract gives reliable and permanent results, stimulating strong contractions of the uterus. The number of complications during the puerperium is not increased. According to the observations of many authors, the injection of pituitary

extract may be repeated one hour after the first injection; if injected earlier, it lowers the blood pressure, thus destroying the action of the first injection.

Ovarian Pregnancy with Full Time Fetus.—Grimsdale (Jour. Obst. and Gyn. Brit. Emp.) has operated upon a woman of twenty-two years, married three years, during which time she had an abdominal tumor. She had had two still-births and one normal child within two months. The specimen removed consisted of the left ovary and tube and mesosalpinx. When opened, the ovary was found to contain a fetus and placenta. The period of development of the fetus was shown by the x-ray to be full term. Lack of a history of amenorrhea and of pain suggests the possibility that this gestation was coincident with one of her uterine pregnancies.

Free Aponeurotic Graft in Operation for Spina Bifida.—Pieri (Ann. de med. et chir. inf.) gives a new method of obtaining tissue sufficient to cover the deficiency in spina bifida. He has operated successfully in two cases, both of which are now living. In one case hydrocephalus developed a few weeks after the defect was closed. One infant has had two deficiencies closed, one at the coccyx and one at the beginning of the dorsal region. The closure of the uncovered space is easy when there is a pedunculated tumor, but in sessile tumors it is most difficult to obtain material enough to permanently close the openings. A regeneration of the planes of the skin and subcutaneous tissues should be attempted. The Dr. makes an elliptical incision in the skin and subepithelial serous zone, and resects it down to the spinal cord. He brings these together, and then cuts from the external surface of the thigh an elliptical piece 5 by 2 centimeters in size, cutting down to the muscles themselves, and removed all the tissues together, skin, cellular tissue, and fascia lata. This is grafted over the opening of the spinal canal, with silk sutures uniting each layer. A perfect result was seen fifty days after the operation, in the first child, but there was considerable hydrocephalus. The same procedure was undertaken in another case in the cervicodorsal region. There was a pedunculated tumor the size of a nut and in the sacral region another sessile tumor. In this case also the operation was successful and the child has no hydrocephalus at present. The idea of the transplantation of the aponeurotic tissues to cover the opening in cases of spina bifida has thus been practically demonstrated. Its advantages are that free aponeurotic grafting is possible in cases in which mobilization of the bones and mus-

cles is impossible; the technic of this operation presents no difficulties or dangers either in the region from which the graft is taken or where it is placed. The aponeurotic graft preserves its vitality, and it does not matter if the skin graft does not grow.

Semeiology of the Cerebrospinal Fluid.

—Rathery (Ann. de med. et chir. inf.) says that we can obtain from the examination of the cerebrospinal fluid important knowledge of both local and general conditions in the body. Every modification of the metabolism is shown in the composition of the cerebrospinal fluid and an explanation may be gained from it of certain general and dyscrasic nervous manifestations. The fluid probably is secreted from the choroid plexuses and the intraspinal circulation is maintained through minute openings in connection with the nerve fibers and the lymphatic spaces of the nervous tissue. The modifications of the cerebrospinal fluid in various diseased conditions are affected by mechanical factors, such as obstruction of the circulation, and by inflammation. The fluid becomes changed in contact with an inflamed brain surface in its histology, its content of blood cells, leukocytes, and microbes. Important chemical changes also occur in disease. Physical signs, as the force with which the fluid flows out of the puncture, have diagnostic importance; the color may be reddened by blood cells, or become deeply yellow. It may become turbid with pus or leukocytes, showing the presence of ordinary meningitis, an abscess, or cerebrospinal meningitis. Its density and viscosity are important. The chemical elements that may be altered or present abnormally are albumin showing an organic lesion, especially inflammation, and hyperalbumose in meningeal inflammations. Its presence differentiates between organic and functional diseases. It is also increased in general diseases of infectious nature. Not only the amount of albumin but also its nature is important. Serine is especially increased in tuberculous and cerebrospinal meningitis, while globulin is increased in syphilitic and parasymphilitic affections. A negative test for globulin eliminates syphilis, while a positive reaction is not a positive evidence of that disease. The amount of urea present in urine is increased in uremia, and the larger the amount present the graver the prognosis. Sugar is increased in hyperglycemia, intoxications, infections, and in meningeal congestion; it is diminished in meningeal hemorrhage and meningitis. The amount of hyperglycemia is in relation with the severity of the septic condition and assists in the diagnosis between meningitis and meningism. Acetone may be found in

the fluid; chlorides are lessened in inflammation, especially in tuberculous meningitis. The histological study of the fluid is most important; red cells, polynuclears and lymphocytes vary. Red cells are present in hemorrhage; polynucleosis means acute inflammation of the meninges; lymphocytosis indicates a chronic inflammation; it is constant in tuberculous meningitis. When convalescence begins it changes to lymphocytosis, and this change has important prognostic value. In syphilis lymphocytosis is frequent, both in hereditary and acquired disease, in the secondary or the tertiary stage. Bacteriological examination may demonstrate tubercle bacilli, the bacillus of Weichselbaum, of Eberth, of Loeffler and colon bacilli. Cultures and inoculations are also of value.

Use of Salvarsan in Pregnant Women—

Sauvage (Ann. de gyn. et d'obstet.) has collected 130 cases of the use of salvarsan in pregnant women. The Dr. finds that salvarsan has a special action on the liver and kidneys. It will cause the elimination of albumin from the urine and of reducing substances, sugars and urates. All observations demonstrate that salvarsan acts favorably on the kidneys and liver during pregnancy. During gestation salvarsan is eliminated by the kidneys in the same manner as in women not pregnant. But since accidents have happened it is desirable to use the greatest prudence in its administration to pregnant women. The author sums up his observations in these words. The study of the modifications of the Wassermann reactions shows that salvarsan acts directly on the syphilitic poison in pregnancy and causes an attenuation of the virus so marked that the Wassermann reaction often becomes negative. This action is inconstant and may be only transitory. The contradiction that may exist between the Wassermann reaction and the syphilitic symptoms makes the action in gestation more uncertain than usual. The action of salvarsan on the ovum is obscure. It is questionable whether the placenta does not oppose itself to the passage of the arsenic to the fetus. Most observers have not found arsenic in the blood of the child shortly after labor. After an injection given to the mother there is active and passive immunization during pregnancy. At the time of pregnancy there may be a discordance between the reactions of mother and infant, the blood of the mother being negative and that of the cord positive. Injections of salvarsan have not a deleterious influence on the duration of pregnancy. The Dr. concludes that the use of salvarsan may have a very good effect on syphilis

during pregnancy when active syphilis is present. It assures a normal pregnancy and the delivery of a healthy, well developed child at term. In some cases there is latent syphilis in the children and in a few cases a dystrophic or malformed child may be born. Active syphilis during pregnancy justifies injections of salvarsan made carefully. Latent syphilis without active symptoms may indicate salvarsan to bring into the world a living child. Normal kidneys and liver must be guaranteed.

Thrombosis and Hematoma of the Vulva.—Van Cauwenbergh (Bull. de la Soc. Belge de gyn. et d'obst.) says that hematomata of the vulva and vagina are found during and after labor, and rarely outside of pregnancy. In the non-pregnant women they may be due to brutal coitus, great effort, violent cough, a blow, etc. In pregnancy there is a predisposition to them owing to the relaxation of the tissues, and the accident occurs from falls and blows. During labor the compression prevents the lesion from being recognized until after the birth of the child, when the large part of the hemorrhage occurs, producing a tumor occupying the vulvar region. They may also occur during the course of an operation on the perineum and cervix. These hemorrhages may be intrafascial, extending through the labia majora toward the perineum and perirectal tissues, or suprafascial, when they appear distending the cellular tissues of the pelvis even into the retroperitoneal region. The suprafascial hematomata are difficult of diagnosis and rare. The Dr. observed a case after a very prolonged labor which did not appear until the day after delivery. The rational treatment of these lesions consists of expectant treatment until the hemorrhage has ceased and until the lochia have ceased to be excessive. After this the tumor may be incised, all the clots turned out, the cavity packed with antiseptic gauze, and allowed to granulate. These lesions also occur after immediate repair of the perineum.

Salvarsan in the Treatment of Tabes Dorsalis.—Leredde, (Bulletins et Memoires de la Societe de medecine de Paris,) reports good reports from energetic treatment with salvarsan or neosalvarsan in these cases. The Dr. considers the new remedies, administered in the manner he describes, distinctly more beneficial than mercury. In thirty-nine cases of tabes, given altogether 288 injections of the arsenicals, a clinical cure was obtained in nearly all who had received three or more complete series of injections as advised by the author.

The feature on which greatest stress is

laid is the use of full doses, viz., 0.01 gramme of salvarsan or 0.015 gramme of neosalvarsan to each kilogramme of body weight. The earlier doses, however, should be small; thus, in the series of injections, the doses given should be: Salvarsan, 0.2, 0.3, 0.6, and 0.6; or, neosalvarsan, 0.3, 0.6, 0.9, and 0.9—unless recent bulbar or meningeal manifestations should require even smaller amounts at first. The subsequent series of injections should each be preceded by a resting period of one month. The second series should consist of three injections, 0.4, 0.6, and 0.6, of salvarsan, respectively, or corresponding doses of neosalvarsan, and subsequent series, of three injections of 0.6, each, 0.9, or even 1.2 of neosalvarsan.

In using neosalvarsan, which he prefers to the older remedy, the author injects at weekly intervals and not on alternate day, as has been advised.

The ultimate result of the treatment is a disappearance of recent symptoms and of many of the long standing symptoms—not the Argyll Robertson pupil or arthropathic deformities; the progress of the disease is arrested. The Wassermann reaction gradually weakens and becomes negative. The beneficial effects are most striking in respect of the pains, the motor disturbances, visceral paroxysms, bulbar phenomena, and general health. The treatment is unattended with danger if faulty technic and excessive initial doses are avoided and due attention paid to contraindications. No serious untoward effects were observed in any of the cases treated. The alleged aggravation of tabes by salvarsan treatment is simply an expression of Herxheimer's reaction, a normal result of the effect of the drug on syphilitic lesions. Leredde is so convinced of the value of the systematic treatment he employs that he states most of the measures hitherto used in tabes, including analgesics, can be wholly dispensed with only a few physical methods, such as motor reeducation, remaining useful in certain cases to hasten the disappearance of motor difficulties.

Further Experience of the Cardiac Sign in Cancer.—Gordon in the (British Medical Journal) describes this sign as a diminution in the area of cardiac dullness in the recumbent position, as determined by digital percussion. In the normal adult the dullness in that position begins about the third costal cartilage, reaches to the right as far as the mid line, and measures across three to three and a half inches at the level of the fifth costal cartilage. In the cancer patient who presents the sign the dullness begins above at about the fourth

or fifth costal cartilage. its right margin is from one half to one inch to the left of the mid sternal line, and it measures less than two inches across at the level of the fifth costal cartilage. The percussion used should be moderately light. Gordon gives three possible explanations for the sign. The first is that in some cases of cancer the heart is small, but this does not hold for the majority of cases. The loss of elasticity so marked in the skiu may involve the lung tissue, and it is conceivable that a sort of emphysema may be produced thus. Such a form of emphysema is known to occur in cancer, and this undoubtedly helps to produce the sign in many cases. Lastly the cardiac sign is often associated with a very soft and toneless pulse, and with very feeble heart sounds. These phenomena are attributable to a deficiency of blood and a condition of flabbiness of the heart muscle comparable to that of the skeletal muscle. The imperfectly filled soft heart may be supposed to fall back from the chest wall farther in the recumbent position than does the normal firm organ. The striking feature is the great disparity between the area of dullness in the standing and that in the recumbent positions. The sign has certain limitations, namely, in emphysema it is of no value; in conditions in which the organ can be supposed to be abnormally enlarged it is also not useful; the same is true in conditions which tend to increase the area of dullness through retraction of the lung; it is not trustworthy when abdominal distention displaces the heart upward, and it is absent in cases of large esophageal cancer. The sign was found to be positive in eighty-seven per cent. of ninety-three cancer cases, and in only fourteen per cent. of 117 noncancerous cases.

Treatment of Flooding in Pregnancy and Labor. Bar (Bull. de la Soc. d'Obstet. et de Paris) has issued a full statistical report of public experience of hæmorrhages associated with gestation, which he analyzes at some length. The Dr. groups his series into three sub-divisions. First, he reviews hæmorrhage in pregnancy from vicious insertion of the placenta. The Dr. finds that women who have been subject to severe and repeated bleeding run little risk of death if there be already no infection, provided that no infection is allowed to occur during any obstetrical manœuvres or operations in the course of the labor and the removal of the placenta, and all hæmorrhage at the same time checked, as a very little bleeding in these cases may prove fatal. Bar declares that lacerations of the cervix caused by hasty dilatation are espec-

ially dangerous. Secondly, he discusses the sub-division, including retroplacental hæmorrhage in pregnancy. The Dr. advises caution, whether labor be not threatening, or whether it is beginning. The writer relates two cases of embolism, one where the uterine wall was the seat of a true apoplexy, and one where there was sepsis in the puerperium and infection of the urinary tract; all four died, but the fourth case was imprudently removed from the maternity and died at home. Diagnosis of retroplacental hæmorrhage is by no means easy in many instances, and Bar relates a case where all clinical symptoms pointed to this complication. Labor had set in, and black clots were expelled, whilst the cervix was long and rigid and undilated. He performed Cæsarean section. The uterine wall was not ecchymosed, and when the dead child was extracted no trace of retroperitoneal hæmorrhage could be detected. It proved best, according to the writer's experience of this series, to deliver through the natural passage should the cervix be sufficiently dilated or readily dilatable. If the cervix be in a less favorable condition an abdominal operation is indicated. He says that the "classical or conservative Cæsarean section is only justifiable if the general condition be good, all evidence of infection absent, and ecchymoses in the muscular wall of the uterus absent or but little marked; otherwise, hysterectomy is necessary. Vaainal Cæsarean section is reserved by the writer for exceptional cases where great haste is imperative, and hysterectomy, therefore, not quite advisable. He includes in his third group hæmorrhages of the post-partum class. When due to uterine atony surgical aid is rarely called for. As a rule, hæmorrhages due to laceration of the cervix are checked by the tampon. But when this is not the case, and when on drawing down the cervix with the volsella the bleeding vessel cannot be seen and secured, sutures en masse are unsafe. It is better, he says, to operate from above so that the divided vessels can be quickly ligatured.

Significance of Albuminuria in Pregnancy.—Williamson, in The London Lancet, says that a condition of acidosis is found constantly in cases of pregnancy toxemia when the lesions are of a certain grade of severity, and is not found in cases of chronic nephritis even when the symptoms are severe; and, further, that the onset of an acidosis in the course of a chronic nephritis in pregnancy may be interpreted to mean that toxemia has been added to the existing lesions. He has been disappointed to find that these tests have failed in the earlier and slighter cases; in a number of instances

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he could find no evidence of acidosis, and in several instances in which the symptoms passed away under treatment the ammonia-urea co-efficients remained normal, and acetone and diacetic acid were never demonstrated in the urine. In spite of this, however, the tests are of real clinical value. The Dr. does not believe that the symptoms are due to the acidosis; indeed, these results definitely disprove this theory, because the symptoms are often present in a mild form before one can find any evidence of acidosis, but the results of treatment indicate that if one diminish the acidosis the severity of the symptoms will be alleviated. In severe cases of eclampsia improvement follows an intravenous infusion of solutions of sodium acetate and sodium bicarbonate. Some important points in treatment are emphasized:

(1) In cases of pregnancy toxemia chloroform should never be administered, because the action of chloroform is to render more grave the lesions which already exist and to increase the acidosis. Ether administered by the open method is in every way preferable as an anesthetic. (2) Calomel should not be used as an aperient, for the lesions in the liver and kidney produced by mercurial poisoning are of the same nature as those of pregnancy toxemia, and it is probable that mercury even in small doses will increase the gravity of the lesions already existing. (3) For a similar reason douches of mercurial antiseptics should never be employed. (4) In all cases in which an acidosis is present an intravenous infusion with a solution of sodium bicarbonate or sodium acetate should be practiced. (5) The fat metabolism should be spared as far as possible by the administration of glucose. The author's practice has been to administer it by the rectum when vomiting is present and to give it by the mouth in the form of glucose lemonade where the digestive functions are not deranged. (6) When a pregnant woman suffers from chronic nephritis shows evidence of the existence of acidosis, the uterine contents should be evacuated without delay, for with a kidney previously damaged the prognosis of pregnancy toxemia is very grave.

Radium Emanation Therapy.—Engleman, in *The London Lancet*, says that radium emanations have been found experimentally to increase the activity of certain enzymes when applied in small doses, decreasing such activity in larger doses. On the human body radium treatment has been observed to first raise, then decrease the number of leucocytes. Both in gouty and in healthy subjects uric acid excretion, endogenous and exogenous, seems to be

accelerated. All these phenomena may be interpreted as due to an accelerating effect of radium on enzyme action.

Therapeutically, radium emanations are administered in three ways: (1) by baths; (2) by drinking radiated water; (3) by inhalation of radiated air. As to uses and indications, radium inhalations given in any or all of the three ways often cause most striking improvement in gout. Other conditions sometimes improved by radium therapy are chronic articular rheumatism, sciatica, neuritis and neuralgia, asthma, arteriosclerosis and some diseases of women, particularly myoma. The subject is still in the experimental stage, but seems to promise much.

Miscellaneous.

If any of our subscribers have failed to write Masengill Bros. Company, of Bristol, Tenn., for a sample of *Creo-Derma*, we believe they are missing an opportunity to benefit themselves. *Creo-Derma* is an ointment for skin diseases, manufactured by a company catering only to physicians. You will certainly not make any mistake in giving *Creo-Derma* a trial. Those who have used it are generous in their praise; in fact, most of them say they use it in preference to other preparations recommended for skin diseases.

Benzoyl Chloride and Nastin in Leprosy.

Minett in an excellent article on the treatment of epilepsy draws the following conclusions: (1) That nastin has apparently very little beneficial effect on cases of leprosy; (2) a solution of benzoyl chloride in oil shows a slightly higher percentage of improvement than nastin; (3) anesthetic cases of leprosy run a definite course, after which the disease seems to die out, leaving the patient no longer infective; (4) these cases recover sensation after a time in areas previously anesthetic; and after self amputation only scars remain. This is a natural process and takes place without any treatment whatever. It is not apparently influenced by either nastin or benzoyl chloride; (5) nodular cases do not tend to improve naturally as above, except in very rare instances; nor do they appear to be affected appreciably by either nastin or benzoyl chloride; (6) the so-called destruction of bacilli is a natural process varying considerably and does not appear to be influenced by nastin or benzoyl chloride; (7) the variation of the amount of destruction of bacilli observed is of limited value as an indication of the effects of treatment; (8) benzoyl

chloride in petroleum oil is extremely valuable as a nasal spray or a paint for ulcerating surfaces, it quickly renders the discharge free from the presence of bacilli: (9) its regular use for this purpose is strongly recommended in leper asylums.—*Journal Tropical Medicine and Hygiene.*

Cerebral Symptoms in Phthisis without Meningitis.

The appearance of marked cerebral symptoms in phthisis is, according to Querner (*Berl. klin. Woch.*) often interpreted as tuberculous meningitis, and when they disappear and the patient recovers, the physician points to the case as illustrating the fallacy of regarding tuberculous meningitis as incurable. True enough, a few cases of recovery from tuberculous meningitis have been recorded in which tubercle bacilli were found in the cerebro-spinal fluid, but the classical symptoms of tuberculous meningitis may also exist without any lesion of the brain or meninges. It is therefore impossible to diagnose tuberculous meningitis only from clinical observations, and proof positive of this condition is obtainable only by a necropsy or the demonstration of tubercle bacilli in the cerebro-spinal fluid. The writer reports the two following cases: A workman, aged 29, had suffered from phthisis for over a year. He was a heavy drinker and had a nervous temperament. The temperature was high, the pulmonary disease was actively progressive, but the urine was normal. On his admission to hospital he showed no signs of any nerve lesion. A month later he developed a slight attack of otitis media, his liver becoming at the same time swollen and tender. Between two and three weeks later signs of cerebral disease appeared. Kernig's and Oppenheim's signs were positive, and there were general peripheral hyperaesthesia and delirium. There was cervical rigidity, and the pupils failed occasionally to react to light. Cerebrospinal fluid withdrawn by exploratory puncture contained blood, but no tubercle bacilli. Death occurred after the cerebral symptoms had lasted for nearly three weeks. The necropsy revealed no cerebral abnormality except a slight excess of cerebro-spinal fluid and dilatation of the ventricles. A joiner, aged 63, suffered from phthisis and alcoholism. He was febrile, his pulmonary disease was actively progressive, and his left lung was compressed by a pleural effusion, 1,500 c.cm. of which were withdrawn. This eased his respiration. Soon afterwards cerebral symptoms appeared. Delirium, cervical rigidity, peripheral hyperaesthesia, Oppenheim's and Kernig's signs, and finally general convulsions were observed. This condition lasted

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for fourteen days, at the end of which the patient died. No anatomical lesion of the brain or meninges was demonstrable at the necropsy. The question naturally arises, How do the classical signs of tuberculous meningitis arise in such cases? The author agrees with the explanation given by Lyonnet, who found that the cerebro-spinal fluid of patients suffering from tuberculous meningitis, when injected into tuberculous guinea-pigs, caused the same reaction as tuberculin. He concluded that the symptoms of tuberculous meningitis are due to the presence in the cerebro-spinal fluid of a tuberculin, and that the severity of the symptoms is proportional to the toxicity and quantity of this substance. This view accounts for the lack of conformity between the severity of the symptoms and the anatomical changes found post mortem in cases of tuberculous meningitis. Lyonnet further describes a condition which he calls *encephalopathie tuberculineuse*. This is due to the same tuberculin in the cerebro-spinal fluid as that which evokes the symptoms of tuberculous meningitis, but it is unaccompanied by any anatomical lesion of the brain or meninges. He includes in this class cases of epileptiform convulsions in tuberculous patients, as well as many cases which have hitherto been quoted as illustrating the curability of tuberculous meningitis.—*British Medical Journal.*

On Monday evening, July 7th, at the home of the bride's parents, Mr. and Mrs. H. E. Boyd, of this city, Miss Ruth Boyd and Dr. L. J. Moorefield, of Guilford College, were married. Rev. Dr. A. R. Shaw, pastor of Tenth Avenue Presbyterian Church, performed the ceremony.

Dr. Moorefield graduated from the North Carolina Medical College in this city in May, and recently stood the examination before the State Examining Board at Morehead City. Dr. and Mrs. Moorefield will make their home in High Point, N. C.

Consecutive Displacement of the Cerebral Hemisphere in the Localization and Removal of Intra-cerebral Tumors and Haemorrhages.

Under the above title Hudson (Ibid.) describes the technique which he at present adopts in doing craniotomy. The essential feature of his methods consists in making very large openings either in the parieto-occipital region or the frontal region, so that room is made for the backward or forward displacement of the corresponding cerebral hemisphere by the increased intracranial tension present in cases of tumor or haemorrhage. He has been led to adopt this plan by noting the damage done to the brain when it is forced by the increased tension against the edges of an opening of ordinary size. He describes a case, for instance, in which great damage was done by the edges of an opening where the legs of the bone-flap measured as much as $3\frac{1}{2}$ inches, and where a two-stage operation was contemplated. The case was one of cerebral tumor, and it was expected that the tumor, which was subcortical, would be forced towards the opening after the pressure was so far relieved by making an osteoplastic flap and dural opening. The patient died 48 hours later, and examination of the brain showed the great damage done by the pressure against the bony edges, owing to the insufficient room provided for expansion of the brain.

In order to obviate such occurrences Hudson proceeds as follows, say in a case where a tumor in the motor area has been diagnosed: First a flap of ordinary size is turned down, and when no tumor is found a second flap releasing a very large area of bone, posterior to and contiguous with the first flap, is made. In this way room is provided for the entire hemisphere to bulge backwards, so to speak, without fear of its being squeezed against the edges of the bone opening. The tension is widely distributed by this manoeuvre, and a subcortical tumor is much more easily palpated and found. Where a tumor is found irremovable the flap is replaced and anchored

loosely by what Hudson terms expanding silver wire sutures, i.e., tied so loosely as to allow for expansion. Similarly, large openings may be made in the frontal region when the location of a tumor is in the anterior part of the brain. Large bone flaps are best cut, according to Hudson, by making a number of openings with a burr, and joining these by using strong cutting forceps, a method which limits the haemorrhage, as the forceps crush the bone sufficiently to close the vessels and prevent bleeding. Special instruments devised by him for the purpose are figured and described. The paper is illustrated by numerous figures showing the extent of the openings made. —Edinburgh Medical Journal.

Medical Men and Morals.

G. Pernet points out that it is not the doctor's duty to investigate reputations; he has to investigate and treat disease. In a recent case the Lord Chief Justice pointed out that a court of law was not a court of morals. Clergymen and priests seem to be ambitious to treat disease, but that, of course, is not their function—*ne sutor*. It is well to understand that syphilis is no more sinful than measles, typhoid fever, or small-pox, and to remember that it is of vital importance to the community that syphilis should be treated quickly and adequately. —Clinical Journal, London.

Diphtheritic Hemiplegia.

Rolleston states that diphtheritic hemiplegia is usually of embolic origin; in 12 out of 18 autopsies embolism has been found. Embolism is probably more common in diphtheria than in any other acute contagious disease, being due, as Marfan has pointed out, to an apical endocarditis. The embolism may be found not only in the cerebral circulation, but in the kidneys, spleen, lungs, and even the abdominal aorta, as in Marfan's case. —Proceedings of the Royal Society of Medicine.

High Altitudes and Diabetes.

Dutoit mentions the clinical fact that high altitudes exert a favorable influence on diabetes and adds that thus far no satisfactory explanation of this sequence has been forthcoming. One authority attributed the benefit to chalybeate waters while others give the credit simply to physical exercise and out-of-door life. The assertion has been advanced that mountain dwellers do not suffer from diabetes, and statistics show that in the mountain cantons of Switzerland the number of deaths from diabetes is much below the average. Recently Hoessli and Wanner have each seen in this phe-

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nomenon evidence that the rarefied air is a stimulant of carbohydrate oxidation. Hoessli saw a complete recovery of a patient with chronic diabetes. It does not appear that any diabetics have yet been submitted to calorimetric tests, but high altitudes are known to bring about increased oxygen consumption and carbon dioxide elimination.—Deutsche medizinische Wochenschrift.

Acute Infectious Bronchitis.

Acute bronchitis is grave when the inflammation extends to the small bronchial tubes and when it assumes an infectious character. We will rapidly pass in review

the causes which make capillary bronchitis peculiarly dangerous, or the differences, other than those of calibre, existing between the primary divisions and the terminal ramifications of the bronchial tubes. The walls of the primary tubes are thicker and their epithelium and vibratory cilia offer an impediment to the invasion of microbes (streptococcus, pneumococcus, the bacillus of Pfeiffer, staphylococcus, colon bacilli, and so forth), their mucous glands, with their rich enervation, allow of their expelling, by reflex or voluntary expectoration, foreign bodies, endogenous or exogenous. We all know their means of defence. On the other hand, the finer branches of the respiratory

tree possess no ciliated epithelium, no glands, no reflex sensibility to reject secretions; their walls are delicate, and are a slender protection to the pulmonary cells in their vicinity. Their means of defence are feeble. Infectious bronchitis, carefully studied by Huchard, may be primary; but it is more frequently secondary, following on an attack of pneumonia, influenza, measles, whooping-cough, diphtheria, or tuberculosis. Then an ordinary attack of bronchitis develops symptoms of great gravity from its extension to the terminal tubes, which by reason of their small calibre (easy of obstruction, always threatened with asphyxia). In the infectious type of bronchitis the inflammation cannot so affect the larger tubes, therefore its symptoms are ever those of the capillary form, producing a subasphyxial condition, which, with the general depression of the patient, calls for a grave prognosis. The signs furnished by auscultation give but little idea of the serious state of the patient; some subcrepitant rales, dry or moist, heard in the course of short and imperfect inspirations. The expectoration is ordinarily scanty. The temperature is sometimes slightly raised, and sometimes normal, and may occasionally become sub-normal. The subasphyxial state to which we have referred is due to a mucopurulent exudation in which are to be found staphylococcus, streptococcus, pneumococcus (these are the pneumococci which we meet with in the most serious forms); this exudate fills and obstructs the bronchi. A parietic state of these latter, a sort of bronchoplegia, contributes to the production of subasphyxia, which is recognized as causing sometimes a considerable fall in temperature. These are the characters of the secretion by which we establish the diagnosis. The secretion is the enemy. Against it all the energy of the physician must be directed. We cannot ignore it; therefore, we must combat the cough by opium and its derivatives, antisepticise the broncho-pharyngeal region, supply the patient with medicated inhalations, have recourse, in case of collapse, to warm baths, &c. But above all we should endeavor to modify the exudate, liquefy it to facilitate its expectoration, and disinfect it to attenuate its toxicity. We do not say that the means at our disposal admit of wholly altering its character, but we should make it as innocuous as possible and diminish to the utmost its infectious property. To effect this we have the balsams which are ready at hand and at the disposal of all physicians, and of the balsams we find creosote, balsam of tolu, and tar the most suitable. They are eliminated by the lungs, modifying the secretions, causing them to lose

their mucopurulent character, and to become more fluid; under their influence the bronchi are disinfected, the epithelium becomes healthy, and the erosions and alterations in the mucous lining disappear. But it is necessary to employ a creosote of great purity, and with it may be given the balsam of tolu and tar. This combination causes the drugs to be better tolerated, and singularly augments their therapeutic power. The combination is frequently prescribed in the form of Livonienne's drops, or as capsules. Livonienne's capsules, according to V. Gardette (*Formulaire des Spécialités Pharmaceutiques*), contain beechwood creosote, 0.05 centig.; Norway tar, 0.075 millig.; balsam of tolu, 0.075 millig. in each capsule. Two capsules are directed to be taken with each of the two principal meals.—*Gazette des Hopitaux*.

Post-Operative Results of Nephrectomies.

Bazy (*Academie de Medicine*) reports, from his experience, that patients who have had a kidney excised, will, the other kidney being healthy, enjoy as good health as if they possessed two kidneys. The function of the gland being carried on normally after the removal of its fellow, and after important operations, demonstrates the integrity of the function. Eleven years after a nephrectomy for a tumor, Bazy removed the uterus and its appendages from a female who bore the operation as well as if she had not had a kidney excised. He classifies operable cases in three groups—tumors, tuberculous, suppurative. First group.—The ablation of tumors. These cases give the most favorable results; the patients being in health fourteen years, eleven years, eight years, five years and three years; he does not include the more recent cases. Second group.—Tuberculous kidneys. In these cases the success largely depends on the state of the bladder; the bladder being healthy, the result is favorable; those in whom the bladder is affected are benefited more or less rapidly in proportion to the character and duration of the vesical lesion. Third group.—Suppurative kidneys. Nephrectomies for simple suppuration do well. After the operation both the albumen and pus disappear from the urine.—*Gazette des Hopitaux*.

The Treatment of Burns in Vienna —

In Lotheisen's clinique in Vienna the toxic factor is regarded as the most important one to combat when dealing with a case of severe burns. The routine practice, as given by Lieber, is to swab the burnt surface gently with benzine, and then to power it thickly with novoioidine powder

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and to cover it with gauze. No attempt to render the skin absolutely aseptic is made morphia and anaesthetics are avoided, as tending to promote or increase shock. When pain is very severe anaesthesia powder is also used; this is both antiseptic and analgesic. The old dressing is removed in a bath when necessary, and the process repeated. Blisters are snipped before the novoidine is applied. Cardiac stimulant are given freely, and a great point in the treatment is copious saline infusion, which is stated to have given admirable results. All wet dressings, ointments, and sedative drugs are avoided religiously.—Hospital London.

Therapeutic Action of Splenic Extract.

H. R. Harrower gives the following summary of the actions of splenic extract, as a result of the analysis of nearly fifty communications on the subject. Its value is due presumably to certain splenic hormones on which, in a degree, the following phenomena are dependent. 1. Leucocytosis, phagocytosis, and possibly hemoglobin formation and iron metabolism; 2. tryptic digestion, thus directly increasing assimilation and nutrition; 3. Intestinal digestion and the production of enterokinase; 4. the process of healing, both as regards the cessation of hemorrhage and the production of rapid connective tissue formation, 5. in-

crease in the functions of the spleen itself. These actions are all held to be the grounds for the beneficial effects of splenic extract in pulmonary tuberculosis, and to them there is to be added the fact that the extract exerts antagonism to the tubercle bacillus by an influence on its culture medium in the body, due to production of a colloidal substance.—Lancet, London.

Gold Salts in Malignant Tumors.

Experimental studies upon the effects of various gold salts on the malignant tumors of animals have been made by C. Lewin. He employed gold and sodium chloride, colloidal gold and gold and potassium cyanide intravenously. The effects of these gold salts were very pronounced in the carcinomata of mice. After as few as two intravenous injections, degenerative changes are very apparent; hemorrhages takes place into the tumor and the specific cells become necrotic. After three or four tumor injections, even hard tumors may be converted into cystic structures filled with cell detritus. It seems as if the gold salts had a specific toxic action upon the capillaries of the tumor and not upon the tumor cells, as has been claimed for other metallic salts. The capillaries of tumors are particularly vulnerable since they are the most recent in the organism and probably have insufficient resisting powers owing to their rapid growth.—Berl. Klin. Woch.

Treatment of Amoebic Dysentery by Emetine.

M. Chauffard, in a communication to the Academie de Medecine, tells of the good results obtained by him in some cases of amoebic dysentery by the subcutaneous injection of emetine. One of his successful cases was that of a patient who for five months was suffering from an hepato-bronchial fistula, and expectorated from 200 to 250 c.m. cubes of reddish pus; a dysenteric ulcer existed in the rectum, and the temperature oscillated between 98.6° F. and 100.4° F. The general health was poor. A radiogram showed an opacity extending from the base of the right lung and blending with the shadow of the liver. From the 21st to the 26th of December the patient got six subcutaneous injections of four centigrammes each of the hydrochlorate of emetine. They were well borne, and caused no unpleasant effects. The expectoration, which was 200 cubic centimetres on the first day, fell to 150 cubic centimeters on the second day, to 60 on the third day, to 45 on the fourth; on the fifth day the patient expectorated but three times, and in a little time the expectoration completely

SINKINA SIN=without
KINA=quinine

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ceased. During this time the temperature fell to normal and remained so. Leucocytes fell from 49,000 to 19,800, polynuclear cells from 77 to 63. The rectal ulcer cicatrized, and the base of the right lung cleared up.—*Gazette des Hopitaux*.

Iodine Vaporization in Therapeutics.

Boissart describes a method of applying the antiseptic power of iodine, which method has been devised by Louge of Marseilles. It consists in the direct application of iodine vapor to cavities normally closed, to fistulous tracts, to the surfaces of wounds, to the ear, and to the uterine cavity. The essentials of Louge's method consists in the heating of iodotorm contained in a flask and the conduction of the iodine vapor generated therefrom through a glass tube, the distal end of which is drawn out to a fine point, and which is applied to the cavity or surface to be treated. The antiseptic property of iodine renders this method of particular value in the treatment of infected wounds, and of cavities that are not readily accessible to the ordinary therapeutic agents.

Vaporized iodine is of eminent value in the treatment of tuberculous cavities and sinuses, furuncles that have been incised, anthrax, and chronic suppurations of the ear or of the mastoid. It is also of value in the treatment of uterine affections, such as simple metritis, inoperable cancer, and puerperal infection. In the last instance the iodine vapor is introduced into the uterine cavity by means of a double-current glass sound (iodine attacks metal). Varicose ulcers and soft or hard chancres are also favorably influenced by means of iodine vaporization. The duration of the individual treatment is three or four minutes. Louge has proposed the employment of this method in the treatment of synovitis, the vapor being introduced into the joint cavity by means of a syringe after the fluid has been evacuated.—*Gazette des Practiciens*.

Uses of Blood Serum in Surgery.

Nolhia states that, as shown by Raymond Petit, blood serum need not have been freshly obtained when its curative effects in local inflammations are sought. The serum may be kept in aseptic ampoules or as a dry powder, the latter being diluted with ten parts of sterile saline solution for use. Petit advises the use of horse serum that has been heated to 56° C., certain noxious properties being removed by this process. In burns, after careful cleansing of the adjacent skin, the blebs should be aseptically opened, without removal of the epidermis, and the entire area washed with hydrogen dioxide solution, then with boiled saline

solution. Sterile gauze, dipped in the heated horse serum, should then be applied, and the whole covered with a compress moistened with saline solution, an impervious dressing and cotton wool, rather loosely applied. The dressing should be renewed at first daily, then on alternate days. If the surface becomes macerated, the impervious covering should be left off, the surrounding skin anointed with a little sterile petrolatum, and dried serum used instead of the wet dressing. Rapid healing occurs under this treatment. In abdominal operations, especially in septic cases, from twenty to thirty c.c. of serum may be poured into the peritoneal cavity, before draining, with advantage. In puerperal infection, after the uterine cavity has been evacuated, washed, and dried, a piece of sterile gauze, the end of which has been folded around one gramme of dried serum, and the whole then dipped in the fluid serum, may be inserted into the uterus.—*Semaine Medicale*.

Vaccine Therapy in Chronic Bronchitis.

Gillett used autogenous vaccines in the treatment of eight cases of bronchitis, some acute, others chronic. The sputum is collected as free as possible from mouth contamination by cleansing of the teeth with sterile water and subsequent washing of the mouth and gargling of the throat with plain sterile water. The next sputum is to be expectorated into a previously boiled bottle. A little of the sputum is then washed and shaken up with sterile saline and one or two loopfuls are sown on agar, or other solid medium. From the growth of fifteen to thirty-six hours the vaccine is made up. The dose is regulated according to the response of the patient and is not controlled by opsonic tests. It is attempted, at each injection, to cause a slight reaction. All of the cases so far treated by Gillett have responded favorably.—*Brit. Med. Journ.*

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"I have not employed quinine and urea hydrochloride, but have followed the literature on its use, and I have yet to be convinced that it has any advantage over the

drug I most employ, novocain (for local anesthesia)."—S. J. Young, in American Journal of Surgery, February, 1912.

The Teaching of Eugenics in Schools.—

Leslie argues strongly in favor of eugenic teaching for boys and girls, who would then be much less likely to grow up with false or perverted ideas of sex matters. He briefly discusses the four following questions: (1) Should there be preliminary teaching at home? (2) At what age should

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sex and eugenic teaching be given in schools? (3) What form should instruction take? (4) How should such instruction be given? He gives the following general principles for guidance in regard to the teaching of eugenics: (1) All teaching must be authoritative and given by qualified instructors of the same sex. Vague, amateurish teaching is not only useless, but may be positively dangerous. (2) Teaching should be given on a basis of perfect frankness. (3) The subject should be treated as both a serious and sacred matter. (4) Nature study of plant and animal life is the best introduction to the subject, followed by studies in physiology and personal hygiene. (5) The teaching is best given in small classes, supplemented by incidental and confidential talks with individual pupils as occasion arises. Confidence between teacher and pupil is to be encouraged in every way possible. (6) The teaching should as far as possible have due regard to the age, temperament and home environment of the pupil. (7) The personality of the teacher is every whit as important as

his or her technical knowledge of the subject. (8) There should be encouragement of intellectual, emotional and social interests outside school work.—*Jour. Royal Inst. Pub. Health.*

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Seven-day Fever in the Panama Canal Zone.

Deeks, chief of the medical clinic of the Ancon Hospital, reports an outbreak of a fever of doubtful nature which has spread rapidly and caused serious illness, though without any mortality hitherto. It began with the two post office clerks who deal with the incoming home and foreign mails, spread to the rest of the mail clerical staff of the post-office, and thence to the occupants of neighboring apartment houses. It is apparently a highly infectious disease, the infection being conveyed during the incubation period and not after the symptoms have appeared. There is no special prodromal stage; the onset is abrupt, with rigors or chilly sensations, followed by a sharp rise of temperature to 101-104° F. After six days of practically continued fever with small morning remissions a rapid fall occurs. Relapses do not occur. The pulse and respiration are but little quickened. The spleen is always palpable and definitely enlarged; not so the liver. There is no special blood change, but the urine always contains albumin with a few casts. In two cases the albuminuria was severe and the casts numerous; even in these, however, defervescence was quickly followed by disappearance of the urinary changes. During the attack the chief symptom is anorexia; occasionally there is vomiting at the onset. Vague pains, such as are the rule in pyrexial states, were noted in the head, back, and limbs. Sudaminal eruptions are common, and Dr. Deeks thinks that there is in most cases a general erythema soon after the onset. In severe toxic cases petechiæ have been noted. The incubation period is probably about ten days. All efforts at discovery of the causal infective agent have hitherto failed whether in the blood or excreta. That the disease is not malarial is shown by the course of the fever and the absence of plasmodia from the blood; it does not belong to the typhoid group of infections, since it fails to yield any of the specific serum reactions, and its course serves to differentiate it from dengue, influenza, and typhus fever. The treatment adopted (quinine and salicylates) has exercised no definite effect on its course. Dr. Deeks thinks this disease is identical with that described by Professor Leonard Rogers as "seven-day fever of Indian ports," and that the fact that the epidemic began with post-office clerks sorting mails from foreign parts indicates its letter-borne origin. The epidemic—the first of its kind since the American occupation of the Canal Zone—has spread from Ancon to Panama City. Dr. Deeks remarks that it will be interesting to see if it remains in the Panama

area in epidemic form.—The London Medical Lancet.

Typhoid Pleurisy.

Meoni reports four cases of the condition and reviews the literature of the subject. Pleurisy is not rare complication of typhoid fever. The serious form may be developed early or late in this disease. The hemorrhagic variety is occasionally found. The purulent form is not uncommon; the pus may contain the bacillus of Eberth in a pure state or in association with other microorganisms. The dry and the serous forms of typhoid pleurisy run a brief course and result in recovery, while the purulent form is protracted and generally terminates with a fatal outcome. The author describes a simple non-surgical method of treatment which he employed successfully in one of his purulent cases. After aspiration of the pus he washed out the pleural cavity with a one to one thousand aqueous solution of salicylic acid. This procedure was repeated later on two occasions, as the purulent exudate formed again. The patient made a complete recovery.—*Rivista Critica di Clinica Medica*.

Subarachnoid Injections of Neosalvarsan in the Treatment of Cerebro-spinal Syphilis.

Marinesco of Bucharest does not believe that the impermeability of the meninges for salvarsan and other remedies furnishes a sufficient basis for the use of these substances by injection into the subarachnoid space. The fact that a substance administered intravenously or subcutaneously does not appear in the cerebrospinal fluid is no proof that this substance is not brought into contact with the nervous system. On the other hand such a substance is carried in the capillaries, and is transuded from the blood to be taken up again by the perivascular sheaths. It is almost certain that the lymph of the central nervous system does not flow into the cerebrospinal fluid, or, at any rate, passes into the latter only to a minimal extent. Bearing the above facts in mind, one cannot attribute the unfavorable results obtained in cerebrospinal syphilis by means of the subcutaneous or intravenous injection of salvarsan to the impermeability of the meninges with reference to this substance. These unfavorable results are to be attributed rather to the peculiar nature of nerve tissue, severe lesions of which are not amenable to cure. In many instances irreparable damage has been done to the nerve tissue long before any resort is made to neosalvarsan therapy. —*Zeitschrift für die physikalische und diätetische Therapie*.

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All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.



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The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test.

— After carefully washing, prick the lobe of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and after they have dried, the

allowed to dry without being spread out on the surface of the slide.

slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.

Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count, etc., should be sent to the laboratory on glass slides. As thin a smear as possible should be made.

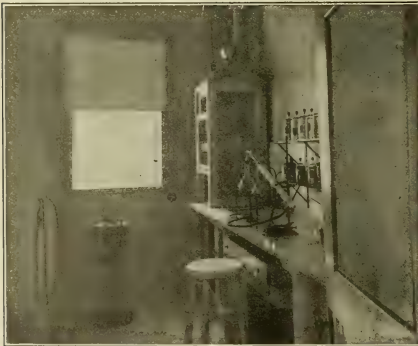
Smears For The Detection of Gonococci.

One drop of purulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made over the surface of the slide.

In collecting a specimen from a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



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operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and the material from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in the bottom of the jar before

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlich's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective.

the tumoris, dropped in
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

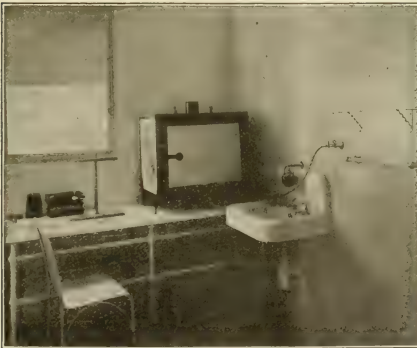
Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis, the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.



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Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourniquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

to coagulate, cork, pack and mail as any other fragile package. At least two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk. The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sent in a sterilized bottle. A large vaseline or quinine bottle usually answers the purpose.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourniquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohol lamp, or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tube, allow



Fig I.



Fig II.

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The college admits men or women of seventeen years of age, with high school diploma or equivalent amount of education to be certified to by the Ohio State Medical Board.

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The charge for tuition is \$100.00 per year, payable annually on matriculation. No extra charge for matriculation, laboratories or graduation.

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The college clinics are held daily from 8:30 to 10:30 a. m., at the Seton Hospital, 629 Kenyon Avenue. Medical and surgical cases are solicited. No charge for operations. Rooms in hospital at reasonable rates. Students also attend the general lectures at the Cincinnati Hospital and Longview Asylum, Send for "Bulletin."

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The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

A "Slow" Liver,

or a comparative degree of hepatic inertia, means a deficient and sluggish biliary secretion, lack of a sufficient quantity of nature's laxative and antiseptic—the bile,—constipation, intestinal putrefaction, and perhaps an auto-toxemia. The regular ad-

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"I have not employed quinine and urea hydrochloride, but have followed the literature on its use, and I have yet to be convinced that it has any advantage over the drug I most employ, novocain (for local anesthesia)."—S. J. Young, in *American Journal of Surgery*, February, 1942.

In discussing Lawen's Method of Anesthesia, Bryan, *Journal Tennessee State Medical Association*, 1912, Vol. VI, 240, notes the use of the following solution:

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Dissolve in 30 c.c. of distilled water, to make a 2 per cent. solution. This method is most uniformly productive of complete local anesthesia and has produced no deaths and no sequelæ.

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Dr. C. C. Haskell, Director of the De-
partment of Experimental Medicine, Dr.
Severance Burrage, Director of the Bio-
logical Department, and Dr. C. S. Woods,
Medical Counsel, all of Eli Lilly & Co.,
attended the meeting of the American Medi-
cal Association at Minneapolis during the
week of June 16th.

Dr. A. L. Walters will become connected
with the Department of Experimental Me-
dicine of Eli Lilly & Co. in July. Dr. Walters
is a graduate of Purdue University with a
degree of B. Sc. in 1904, and spent the four
years following his graduation in the Bo-
tanical Department of the Lilly Co. In
1908 he resigned to enter the medical de-
partment of Johns Hopkins University, and
received the degree of Doctor of Medicine
in 1912, since which time he has been en-

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gaged in hospital work as an interne at the Providence City Hospital, R. I., and at the Johns Hopkins Hospital, Baltimore.

In addition to his medical training Dr. Walters is also a graduate pharmacist, and is especially qualified to carry on work in experimental medical lines.

Cod Liver Oil in Hot Weather.

Unfortunately the disagreeable features of cod liver oil are accentuated in hot weather, a point which must be remembered when prescribing a cod liver oil product. Owing to its palatability, and ease of assimilation, this draw-back to the ordinary cod liver oil does not apply to Cord. Ext. Ol. Morrhuæ Comp. (Hagee), an advantage that has had a marked influence in establishing the Cordial high in professional favor.

Hay Fever; "Disease of Mystery."

Dr. S. Fuller Hogsett, of Pittsburg, in his excellent paper "An Experimental Therapy in Hay Fever," read at a meeting of the University of Pittsburg Medical Society, and published in the April (1913) issue of American Medicine, New York, points to some interesting facts respecting this "disease of mystery," as he not inaptly refers to it. "As far back as the year 1565, says the doctor, 'Botallus reported a case. Again, in 1673, Von Halmont, and in 1698 Floyer, of London, called attention to this condition. In Good's 'Study of Medicine' there is reference to a case by the odor of roses and ipecac."

Thus it will be seen that hay fever, instead of being a disease of modern origin, as many may have presumed, is in reality centuries old.

Discussing the problems of etiology and treatment, Dr. Hogsett continues: "Many theories have been elaborated, and many forms of treatment have been called to the attention of the medical profession. A strain of pessimism regarding the possibility of a cure in this condition appears in the writings of many authors. No one theory accounts for all features of the affection and the many etiological factors."

In 1912 Dr. Hogsett treated a number of cases successfully with Mixed Infection Phylacogen. His observations as to methods and results are of interest and value. "In carrying out the Phylacogen treatment," he says, "I have found that the initial dose should be small when given either subcutaneously or intravenously. It has been my procedure to begin with a 2 c. c. dose subcutaneously or one-half c. c. intravenously. . . . In giving the subcutaneous injection I usually select the insertion of the deltoid or the area just be-

low the scapulæ. The latter seems to be the ideal spot, as absorption takes place very readily and the complaints from the local reaction are much less. I repeat my injection either daily or on alternate days, the interval to be determined by the clinical condition of the patient. It is seldom necessary to give more than four to six injections, the symptoms often disappearing after the second or third injection. Almost immediate relief is noted by the patient. The irritating discharges from the eyes and nose are diminished in amount, the sneezing is lessened, the dyspnea is relieved, and the patient usually sleeps comfortably. All cases that I have treated successfully have remained well through the season. I have yet to record only one failure, but I have not had a sufficient number of this class of cases as yet to warrant a positive claim that this remedy will act in all forms of the disease."

Clinical experience with Mixed Infection Phylacogen in the treatment of hay fever is inconsiderable as yet. The product had its inception in 1912, when the season was well advanced, and the opportunities for its employment were necessarily limited. The next two months will undoubtedly tell the story of its applicability to this hitherto intractable disease, and the results of a more extended trial will be watched with a deal of interest.

No cathartic can successfully take place of the saline. It supplements and rounds out all other cathartics, enabling them to have this perfect work and in many instances is sufficient of itself. No other cathartic acts with such cleansing effect upon the lower intestinal tract and makes such a clean sweep of the toxic matter lurking there.

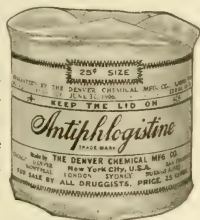
And, besides, saline laxative is much than a mere cathartic or laxative. It is antacid, cooling, stimulating to the normal secretion and function of the gastro-intestinal tract from end to end. Thus it is an invaluable adjunct to all other medicinal treatment, which cannot possibly produce its maximum benefit in the presence of autotoxosis and intestinal fermentation. Its judicious and early use will shorten the course of all febrile and toxic disease, and will head off many a serious result of disordered metabolism.

There is hardly a condition in which Saline Laxative is not indicated or is not beneficial. It is, in this respect, to medicine what the normal salt solution is to surgery—The Abbott Alkaloidal Co., Chicago.

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INFLAMMATION

You are going to have lots of cases of infantile summer diarrhea in the next few months, doctor, and your resources will be taxed to the uttermost in combatting them. These are cases in which ordinary drugs, beyond a few simple cathartics at the outset, are of very little use; and vaccine therapy has not yet established any clinical value. All authorities are agreed that there is no better or more effective agent with which to fight these infections than the lactic acid bacillus; but they all supplement this assertion with the anxious inquiry "Is there any reliable preparation of the lactic-acid enzyme?" Calactenzyme (Abbott) is the answer to this very pertinent question. It is a pure and virile culture of the true *Bacillus Bulgaricus*. Saturate the gastro-intestinal tracts of your little patients with Galactenzyme, by mouth and by rectal enema, according to direction, from the beginning of the disease, and you will find that these dread infections will lose their terrors.—The Abbott Alkaloidal Co., Chicago.

A Systemic Boost.

It is safe to say that the average physician is called upon to prescribe a tonic frequently than any other form of medication, unless it be a cathartic. Patients solely because they are tired, "run down" and generally debilitated, are constant visitors at the physician's office. Such individuals need something that will boost them up to their normal point of resistance and then hold them there; in other words, not a mere temporary stimulation, with secondary depression, but a permanent help to the revitalization of the blood and a general reconstruction. Pepto-Mangan (Gude) is not only prompt in action as an encourager of appetite and better spirits, but is also distinctly efficient as a blood builder and systemic reconstituent. It is pleasant, non-irritant, free from constipating effect and does not stain the teeth. It is thus a general constitutional tonic of positive service in all conditions of general devitalization.

The Test of a Tonic.

The field and function of a systemic tonic is generally understood and appreciated by both physician and patient. To stimulate, whip or goad the vital processes is not to "tone", but, on the contrary, to ultimately depress. A real tonic is not a mere "pick-me-up," but some agent that adds genuine strength, force and vigor to the organism. The genuine tonic is a builder or reconstructor of both blood and tissue. Any agent which will increase the power of the

blood to carry and distribute the life giving oxygen is a tonic in the best and truest sense of the word. Iron in some form is an ideal tonic, as it builds up the vital red cells of the blood and the hemoglobin which is their essential oxygen-carrying element. Of all forms of iron, none is quite as generally acceptable and readily tolerable and assimilable as Pepto-Mangan (Gude). It creates appetite, tones up the absorbents, builds the blood, and thus is a real tonic and reconstructive of high order. It is especially desirable because of its freedom from irritant properties, and because it never causes a constipated habit.

Prepare the Babies for Hot Weather.

During the month of June it is not a bad plan for the physician to take mental "stock" of the babies under his care, especially such as are bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those who nutrition may be below par, so that they may enter the trying summer months in the best possible condition to ward off or withstand the depressing influences of extreme heat or the prostrating effects of the diarrheal disorders of the heated term.

Careful attention to feeding is, of course, a *sine qua non* and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hematologic standpoint. The marasmic anemic baby deserves special attention in the way of building up and restoring a circulating fluid which is deficient in red cells and hemoglobin. In the entire *Materia Medica* there can be found no direct hematonic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic tonic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few week's treatment with appropriate doses of Pepto-Mangan very frequently establishes sufficient resisting power to enable the baby to pass through the hot summer without serious trouble, gastrointestinal or otherwise.

Remarks on Transverse Colostomy as the Operation of Selection.—McGavin, in *The British Medical Journal*, says that the requirements of a really good colostomy operation are: 1. Good sphincter control; 2, firm support for belt and plug; 3, freedom from prolapse; 4, accessibility; 5, good spur formation; 6, removal of the colostomy to a distance from the site of growth. A

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seriatim consideration of the iliac and lumbar operations reveals the frequent failure of each to fulfill one or more of the requisites, and even the iliac colostomy has little to recommend it. On the other hand, the transverse colostomy seems to fulfill all of the necessities in a large proportion of cases and has few of the common defects. The anatomical position of the transverse colon does away with the effects of gravity in promoting leakage; it even does more than this, for the splenic flexure is higher than the hepatic, and hence if the colostomy be placed to the left of the middle line the passage of the bowel contents toward it must be against gravity before their escape. For the same reason, prolapse is not likely to occur. McGavin has never seen either in his experience. The transverse colon between the hepatic flexure and the stoma acts as a receptacle which can be conveniently emptied from time to time, and patients gain very perfect control over this act, the bowels being moved morning and evening with great regularity. The stoma being made through the thickest and strongest portion of the rectus, and at a point where the fibrous tissues also give their maximum support, the sphincter provided is as nearly perfect as an artificial one can be. The location is ideal for the fitting of a belt, and the costal extremity at this point gives a purchase from which sufficient pressure can be made. Furthermore, greater pressure can be comfortably borne at this point than is the case lower down. The position of the opening is such that it is very easy for the patient to cleanse it and care for it. The site of operation is distant from the most frequent location of growth. Lastly, ultimate reconstitution of the colon is more easily and safely accomplished in this location than in the iliac operation. McGavin supports his contentions with the records of twenty-six cases.

The Interneuronic Synapse in Disease.

—Shaw, in *The British Medical Journal*, says that he does not believe that the cell exhaustion theory explains satisfactorily the pathology of acute delirium. Analyzing twenty-five cases of insanity resulting from sudden and violent mental shock and seventeen cases resulting from the exhaustion of surgical operations, he finds that there was a family history of insanity in about twenty-five per cent. of each group. The average time required for recovery was 5.8 months in the cases due to shock, and 16.2 months in the cases due to operation; that is, about three times as long in the latter. In cases showing delirium only the average time for recovery was about the same in both groups, namely, from three

to four months. In shock the tendency is to the development of acute delirium, while in the exhaustion cases, after operation, the trend is toward depression. In the deliriant cases the tendency is toward rapid recovery or death, while in the others permanent insanity often results. The greater the shock the more the likelihood of delirium, and if the exhaustion theory be invoked, this would be an apparent contradiction in the result to be expected. A sudden minor shock gives rise to a "start" and a sensation similar to an electric discharge through the body. This being a matter of common observation, is it not probable that a very intense nervous discharge might seriously damage the finer nerve arborizations and synaptic junctions, causing a "synaptic fusion" which might be likened to the fusion of electric wires? This, occurring in the higher neuronic terminals and interneuronic membranes, might cause dissociation of the higher centres and misinterpretation of stimuli. The higher associative neurons being the latest developing terminal arborizations are probably the most delicate and susceptible. A further point of interest in this connection is the fact that the average time required for recovery from acute delirium due to shock is identical with that required for nerve regeneration after trauma. Shaw suggests that hysteria may be due to too low an interneuronic resistance, resulting in a constant leakage of nerve current outside the area to which it is normally limited. The opposite condition—an abnormally great resistance—with a periodic disorderly discharge of stored up nerve impulses, might explain certain forms of epilepsy. It might even be possible to locate the region in which the faulty synaptic action was located by a study of the way in which the patient responded to each discharge.

The Hygienic Significance of Bovine Tuberculosis.

Weber emphasizes the danger to human beings of tuberculosis in cattle. During childhood infection occurs not infrequently by way of the alimentary canal and may cause death through local changes or through systemic infection. In exceptional instances the alimentary type of infection may give rise to the usual forms of tuberculosis, both in children and in adults.—*Zeitschrift für die Tuberkulose*.

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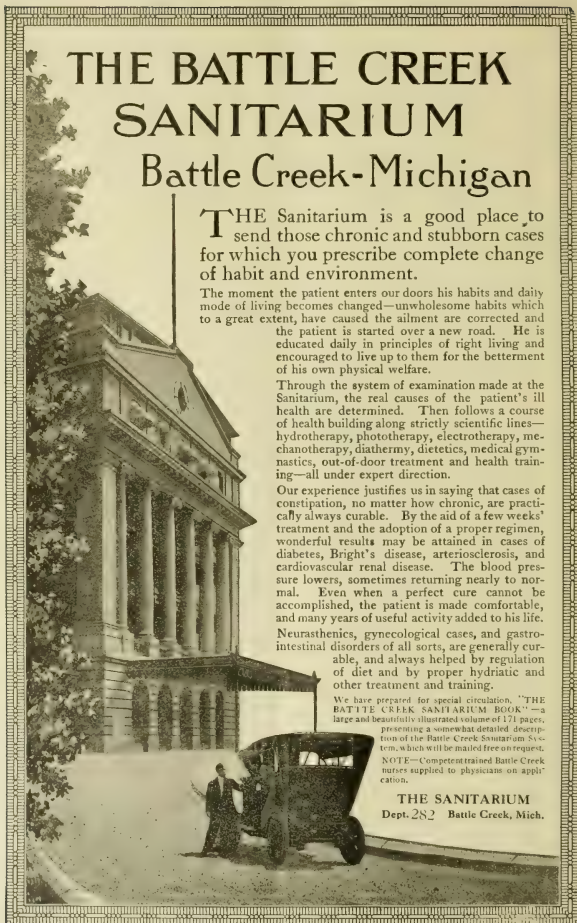
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SOUTHERN MEDICAL SOCIETIES



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October, 1913.

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705 S. Third St., Louisville, Ky.
Albert E. Sterne, M. D., Pres., Indianapolis.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Old Point Comfort, Va.
December, 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Oct., 21-23, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.
Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Ralfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Mobile, Ala. April
16th, 1913.

J. N. Baker, M. D., Sec., Montgomery Ala.
H. T. Inge, M. D., Pres, Mobile, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.
W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Miami, Florida,
May, 14, 1913.

J. D. Fernandez, M. D., Sec.,
Jacksonville, Fla.

Jno. S. Helms, M. D., Pres.
Tampa, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Savannah, Ga.,
April 16-18, 1913.

W. C. Lyle, M. D., Sec. Augusta, Ga.
W. W. Pilcher, M. D., Pres.,
Warrenton, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Baton Rouge, La. 1913.

Joseph D. Martin, M. D., Sec.,
141 Elk Place, New Orleans, La.

B. A. Ledbetter, M. D., Pres. New
Orleans La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Vicksburg, Miss., 1913.
Date not yet decided.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

S. W. Glass, M. D., Pres., Dublin, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. W. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

L. S. Peters, M. D. Pres. Silver, City N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at (Not yet decided), 1913.

Edgar A. Hines, M. D., Sec.,
Seneca, S. C.

Chas M. Reeves, M. D., Pres.,
Charleston, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Nashville, Tenn.,
April 8-10, 1913.

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O. Dulaney, M. D., Pres., Dyersburg, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Lynchburg, Va.
Oct, 1914.

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VOLUME 68
NUMBER 2

Charlotte, N. C., August, 1913.

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Medical Society of the State of North Carolina meets in Raleigh, June, 16, 1914.

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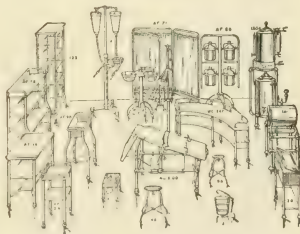
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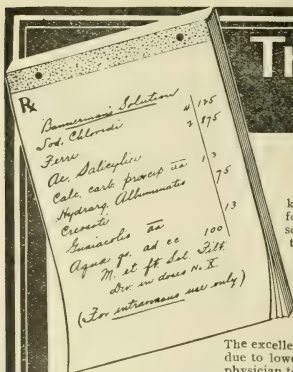
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CHARLOTTE, N. C., AUGUST, 1913.

No. 2.

The Treatment of Chronic Colitis.*

By W. Lowndes Peple, M.D., Associate Professor
Clinical Surgery, Medical College of Virginia,
Richmond, Virginia.

There is nothing more interesting in the practice of medicine than to watch the evolution of a well defined disease out of the chaos of widely separated facts and isolated groups of symptoms; to see them put together piece by piece until finally the classified and completed whole finds its way by the journals to every hamlet, and what was at first the special knowledge of a few, becomes the common knowledge of us all. Most of us are old enough to look back upon the work in appendicitis, gall stones and cholecystitis. Then came hook worm disease, and finally pellagra. How rapidly has the knowledge of these diseases spread.

Cancer and ulcer of the stomach will soon be added to this group, and we will look back and wonder why it was all so obscure, so confused, in the beginning. When a so-called morbid condition is given careful study there is very apt to emerge a well defined disease with a specific cause, and when this much is accomplished the end is not far off.

The chronic dysenteries long regarded as morbid conditions, a result of disordered function, are gradually resolving themselves into mere symptoms of definite disease elsewhere, or one of two types of chronic colitis.

It is not the purpose of this paper even to review the multitude of investigations and experiments with regard to the specific organisms responsible for chronic colitis, or, to champion the cause of one or another of the many ardent workers in this field.

For the present they have given us two eminently practical facts:

First, that there is an obstinate type of dysentery caused by infection with amœbæ.

Second, that another type, almost equally difficult of management, is due to bacterial infection.

As clinicians it is of the first importance that we learn to differentiate clearly between these two types.

While there are many points in common in the treatment of the two, there are others where the lines of treatment sharply diverge and the question of a cure will hinge upon the differential diagnosis.

The first step in the consideration of this subject is to disabuse our minds of the old

hallucination that amœbic dysentery is necessarily and essentially a tropical malady; and that failure to establish the fact of a previous tropical residence is sufficient grounds for excluding the amœba as a causative factor.

Amœbæ have been found in the waters of our lakes and ponds and rivers, and even if we admit that these varieties are non-pathogenic, there is an ever ready source in the vast amount of Southern fruit and vegetables which pour into the Northern market places.

To substantiate the foregoing statement I wish to quote from an article (J. A. M. A. Nov. 4th, 1911) by Dr. W. E. Sistrunk, of Rochester, Minn., which came under my observation after the writing of this paper:

"The feces of 110 patients suffering with chronic diarrhœas, anæmias, or inexplorable abdominal conditions were examined. Sixteen showed pathogenic amœbæ (*Entomæba tetragena*) and of these, eleven had never been South."

Amœbæ are not only found in our streams and lakes, but they are being found more and more frequently in our cases of chronic colitis, since we have learned to look for them and how to look for them. Chronic colitis, as it comes to the general practitioner, usually presents a picture somewhat like the following:

The patient, usually a man, comes with the history of months or years of disordered bowels. He has lost weight and strength, and is quite anæmic. He has from three to twenty actions a day, consisting for the most part of mucus mixed with blood and usually accompanied by a most foul smelling odor.

He has usually been the rounds of the physicians of his locality and has tried all the various intestinal digestants, antiseptics, and astringents and has had the bowel irrigated with many different solutions.

He has had periods of quiescence, when he believed himself cured, only to have the bowels break loose again after some slight imprudence in diet, or exposure to damp or cold.

The Diagnosis.—When such a case presents himself, the first thing is a diagnosis. It is what he has been looking for and has not found. Of treatment he has had an abundance.

Having examined the rectum for stricture, tumor or specific ulcers, the first step in the diagnosis is to exclude tuberculosis, by a careful examination of the lungs and other

*Read before the Kanawha County Medical Society at Charleston, W. Va., February, 1912.

organs and a microscopic examination of the feces. The clinical history alone is usually sufficient for its exclusion.

The next step is the careful search for amœbæ, not once, but many times, for they may escape observation by a skillful examiner under the most favorable conditions.

As is well known, the essential diagnostic feature is the mobility of the amœba. This ceases in a few hours after the evacuation and it is probably at this point in the technique that most of the failures occur.

The patient should be given a dose of sodium phosphate or magnesium sulphate several hours before the time set for the examination, and should come to the office or laboratory, so that the examination can be made immediately with a warm stage microscope in a warm room. If this is impossible, scrapings may be obtained with a sigmoidoscope for immediate examination.

As to the differential points between the pathogenic and the benign forms of amœbæ, I do not believe that scientific opinion is sufficiently crystalized for a positive assertion, certainly the technique is not sufficiently well known for us of the rank and file to finally adopt it. I think it a safe rule to follow to regard every case of dysentery in which motile protozoa are found as one of amœbic dysentery, if specific treatment causes a disappearance of the organisms and a cessation of symptoms.

A chronic colitis in which tubercular, syphilitic, and amœbic infection have been carefully excluded, may safely be regarded as one caused primarily by the *Bacillus Dysenteriae* of Shiga, or some closely allied bacillus. This is, however, not susceptible to proof, as Shiga himself states that such a case after long standing does not show the specific organism on culture.

He regards such a case as a sequel or terminal condition following bacillary dysentery.

Since there is pus and ulcerated areas, it is fair to presume that other bacteria are keeping up the inflammatory process started by the *Bacillus Dysenteriae* or some kindred organism.

The pathology of these conditions varies within such wide limits according to the length of time they have existed, that a brief review is all that is possible in a paper of this length.

In both conditions it is important to remember that it is a colitis with which we are dealing and that the ileum is rarely affected for more than an inch or two if at all.

Ulceration varies as to depth and extent from a mere speck to large undermined areas. Severe symptoms may be accompanied by little or no erosion, while cases of long standing, especially of the amœbic

type, may present no active ulcers, but only the scars of many that have spontaneously healed.

Treatment.—Rather than review the many methods of treatment used in these cases, I will briefly outline the principles involved and discuss in detail under the cases reported. Such methods as have in my own hands met with a fair measure of success.

General Measures.—The patient must be put to bed and kept on a liquid or semi-solid diet consisting of such nourishing articles of food as have been found to suit him best. He should be made comfortable with opiates and astringents to limit the number of evacuations and to control the tenesmus, which is often distressing.

Local Measures.—The local treatment, colonic lavage, should be done by the physician himself or under his personal supervision until the attendant carries it out satisfactorily.

The average layman does not know how to give an enema, much less a proper colonic irrigation. I am convinced that many failures of local treatment are due to neglect of this precaution of personal supervision and instruction.

For a drug to act locally it must come in contact with the affected part. Too frequently a quart or more of medicated water is forced into the rectum which is filled with feces and mucus and is immediately expelled without having time or opportunity for any local effect whatever. A saline irrigation should always precede the local treatment to rid the bowel of all extraneous matter. This should be given with the hips well elevated and given slowly so as to fill the entire colon.

When the bowel is washed clean, after a short wait, to allow this contraction to subside, the local treatment is commenced. I was much impressed with an article (J. A. M. A., Oct. 3rd, 1908) by Dr. Granville S. Hanes, entitled "A New Position for the Treatment of Diseases of the Rectum and Sigmoid." He simply inverts the patient over the foot of the table allowing his head to go between two chairs, with the shoulders resting on their edges. An anoscope or proctoscope is now passed through the sphincter and immediately the bowel balloons out as the air rushes in. The viscera gravitating to the diaphragm takes the pressure off the sides and allows the bowel to straighten out.

The walls of the rectum and sigmoid are now easy of inspection and convenient for local applications. Solutions can be poured in and literally dropped to the splenic flexure of the colon.

CASE I.—A woman of 45 with previous good health had been suffering for several

months with a chronic dysentery which had grown steadily worse. The actions were numerous and bloody, in fact, she had suffered several copious hemorrhages and showed the effect of loss of blood to an extent that was rather alarming.

She had been in bed on a strict diet with the usual antiseptics and astringents without even temporary benefit.

I was consulted with a view to performing an appendicostomy.

As the patient lived in the country a microscopic examination could not be conveniently made.

The following plan of treatment was suggested to be persisted in for two weeks and if no beneficial results followed she was to be brought to a hospital for operation:

With the hips well elevated the bowel was irrigated with warm normal saline solution until washed clean of feces, mucus and old blood. Then a pint of saline solution to which was added an ounce of *Pinus Canadensis* (a preparation consisting of Canadian pine alum and zinc sulphate) was introduced into the bowel slowly and retained for ten to fifteen minutes. This was done twice a day. There was immediate improvement and in two weeks the bowel actions were normal and the patient was soon back on her usual diet and attending to her usual household duties. I believe the success was here due to the preliminary washings before the astringent was used and to the thoroughness with which it was done under the supervision of her physician. Unfortunately no microscopic record was obtained but it is fair to presume that this was a case of bacillary and not amoebic infection.

CASE II.—W. J. K., 26 years of age, machinist. Previous history negative except a severe spell of typhoid twelve years ago. After five years of perfect health he developed a diarrhoea from partaking too freely of apple cider. This was neglected and went into a chronic dysentery. In the past seven years he has not been free of blood or mucus in his stools for as long as a month.

The actions vary from five to thirty a day, usually two of moderate size and the rest consisting of mucus streaked with blood.

The bowels were always filled with gas and both the gas and the feces are of a horrid putrid odor.

The stools are hasty and are accompanied by much tenesmus and straining. The nights are better than the days. Often he can go through the entire night without getting up, but at other times he is disturbed twice or more.

At present he is having from eight to twelve actions a day consisting mostly of

mucus and blood. His weight has fallen from 170 to 149 pounds and has at one time been as low as 132 pounds during the past summer.

Proctoscopic examination revealed a boggy mucosa studded with ulcerated areas and bleeding on the slightest touch. The escaping mucus was streaked with blood and of that peculiarly characteristic putrid odor.

Microscopic examination failed to show amœbæ.

Past Treatment.—He has been put to bed as long as a week and confined to the house the two weeks following. He has tried all kinds of restricted diets with little or no benefit. For the past three or four months he has been upon a strict diet of milk, eggs, toast and beef juice. Internally the various tannates, bismuth preparations, intestinal antiseptics and astringents have been tried without any material benefit.

Locally, he has received colonic irrigations (properly carried out) with saline, permanganate of potash, argyrol and other preparations without success.

In view of the failure of all past treatment I performed an appendicostomy, March 28th, 1907, nearly five years ago.

The cæcum was thick, yellow and leathery to the touch. The appendix was of the same appearance and had evidently shared in the general inflammatory process.

Subsequent History.—The bowels checked immediately after the operation and had to be opened by enema until the fourth day when the appendix was cut off and the catheter inserted. After this he received a daily flushing of a quart of normal saline through his cæcum. To allay the gas, five minims of turpentine and five grains of zinc sulphocarbolate were given in acaciæ three times a day. When gas accumulated in the cæcum, untying the catheter and allowing it to escape in this way afforded considerable relief. In a week he was having one action in twenty-four hours besides the one induced by the irrigation. The offensive odor had disappeared and no blood or mucus was noted up to the time of leaving the hospital which was three weeks from the date of operation.

Proctoscopic examination made six weeks from the operation showed the ulcerated patches healed, no blood or mucus, and only a moderate degree of congestion of the mucosa.

After a month the irrigations were discontinued but the fistula was kept open for several months longer with a rubber plug made from the end of a soft catheter.

I have been able to follow this man's history up to within a short time ago. He has regained his former weight and return-

ed to his work after several years of idleness. He has had no symptoms of a relapse. This case was also evidently one of a bacillary infection.

CASE III.—E. M., Farmer, 52 years old, residence, Richmond, Va. General health good prior to present illness. In 1905 began to suffer with dysentery accompanied by indigestion and loss of weight.

This continued for two years, growing gradually worse; he continued to do his work, however.

In 1908 under care of a physician he was rigidly dieted and systematically treated for a month and was greatly improved.

Some months later the trouble returned, however, forcing him to keep his bed much of the time. In 1909 he was operated on for an inguinal hernia. While under the care of this surgeon he was found to have amœbæ in his stools.

He was treated with high colonic irrigations of bisulphate of quinine and was so much improved that he went back to his life on the farm. He had to give up a few months later as the trouble returned and put him in bed again. He was soon weakened and emaciated and was unable to digest the simplest food.

He had many exhausting actions daily, usually blood streaked and always of a peculiarly foul putrid odor.

He now developed a large ischio-rectal abscess and later on a second on the opposite side (both staphylococci). The infection also attacked the kidneys and bladder and the urine was loaded with pus and blood which persisted to a less extent for several months, in spite of energetic treatment.

He had now fallen in weight from 220 to about 100 pounds. It was now that Dr. S. B. Moon, with whom I was associated in this case, decided to try the ipecac treatment. I must confess that I had small hope of this or any other treatment benefiting this patient.

On the first day he was given fifty grains; on the second, forty; on the third, thirty; on the fourth, twenty; and ten grains daily thereafter for four days more. The preparation was the keratin and salol coated pill of Sharp and Dohme.

There was not the slightest nausea and considerable relief from the dysentery was immediately experienced.

His greatly weakened condition made recovery difficult and a change of environment was ordered. He had one relapse due to the demands of an inordinate appetite, but soon with rest and diet and proper treatment caught up again. He has now regained his former weight and strength and is actively at work on his farm.

In conclusion I would say:

First. That every case of chronic dysentery should be searched carefully for amœbæ; not finding them it is not wise, just or conservative, to do an appendicostomy until local measures, coupled with proper diet, rest and medication, have been given a thorough trial.

Second. That appendicostomy has a most useful field in bacillary types of infection that have not yielded to conservative treatment, intelligently carried out.

Third. That cases of amœbic dysentery should be treated with ipecac internally, with quinine irrigations, or irrigations of cold solutions as recommended by Tuttle, faithfully before appendicostomy is done, for according to men of large experience a certain percentage of cases only remain comfortable as long as the fistula is open and irrigations are kept up, and relapse as soon as it closes and irrigation is stopped.

1209 W. Franklin Street.

Intra-Cranial Hemorrhage.

By Dr. Robt. Mann, Memphis, Tennessee.

Intra-cranial surgery is undertaken for the relief of hemorrhage within the skull more often than for all other conditions, affecting this mysterious zone, combined. Therefore, my topic is a common one; so, also, is its importance equally noteworthy.

The uncertainty attending hemorrhage of the brain adds interest to its phenomena, for an apparently serious case proves to be trivial, and, on the other hand, a trivial one proves to be serious more frequently in this condition than probably any calling for surgical interference.

The general classification of intra-cranial hemorrhage into extra-dural, sub dural and intra-cerebral is important, and is adequate for all primary surgical procedures. Other classifications are secondary, and can only be recognized after the skull and dura have been opened, and then they are dealt with in no particular different way.

While trauma plays the principal role in the extra- and sub-dural types, there is generally a more intricate and subtle factor to be dealt with in the intra-cerebral form, such as the rupturing of delicate neoplastic vessels or aneurismal dilations, the disintegration of supporting peri-arterial structure and arterio-sclerosis with its attending high blood pressure.

Any form of intra-cranial hemorrhage may be localized and any form may also become diffused or general by rupturing of the membranes, and the blood flowing into the brain chambers containing the cerebrospinal fluid, and thence down into the fluid of the cord. Particularly is this apt to

occur in fractures of the base, as the dura adheres closely to the bone in this region. It is also at the base that the arachnoid spans the largest cisterns, and in this way predisposes to tearing of its structure. This allows the blood to mix freely with the cerebro spinal fluid, which tends to prevent clot formation, so that the bleeding from the ruptured vessels in these cases is not generally stopped until the intra-cranial equals that of the blood, and when this is attained, the vital center of circulation and respiration and anemia which, unless rapidly relieved, means certain death.

Extra-dural hemorrhages are localized unless there is a tear in the dura mater. Hemorrhages that have diffused freely between and arachnoid, with a small rent in the arachnoid, act similar to large extra-dural clots, and require practically the same interference.

The most disastrous form of intra-cranial hemorrhage is where an intra-cranial vessel has ruptured freely into the ventricles or a free flow of blood has entered into the basal cisterns, which means rapid and severe pressure, with anemia of the medulla and destruction of the function of its vital centers.

The characteristic symptomatic manifestations in any form of intra-cranial hemorrhage will depend upon the location and the amount. Small circumscribed hemorrhages can usually be located, except where situated over a silent area causing no manifest disturbance, or a bulbar region, and causing symptoms of general pressure.

Large circumscribed hemorrhages may cause distinct focal symptoms at first, and later exert pressure sufficient to produce anemia of the brain system with its characteristic slow pulse, high blood pressure, irregular breathing, etc., but by carefully comparing the extent of the disturbance on both sides of the body the location of the clot can usually be ascertained after the pressure has become general.

We know that slight pressure from a clot or depressed fracture may cause serious and sometimes irreparable damage to the brain substance or some of its important functions.

We also know that a force may be transmitted through the brain in some way, and cause damage in the opposite portion. The brain is a delicate semi solid, and the subdural vessels have no tenacious adventitia. Both can be seriously damaged by a slight friction rub with gauze, or instrumental manipulation. The opening of the skull demands the most serious consideration on account of delicacy of structure and organs contained therein. The function of many localized areas of the brain has been defi-

nately determined. Clot pressure with its resultant anemia over any particular area destroys its activity, hence we can in many cases locate the clot by loss of function of some particular member of the body.

It is advisable to open the skull directly over the clot, but it is by no means imperative, as the bone can be ronguered away or a smooth specular passed carefully in different directions and the clot located. The intra-cranial pressure will assist in its removal, and sometimes cause it to be extruded; particularly is this true in the intra-cerebral form.

If the focal symptoms are not sufficiently marked to locate the clot, and general pressure symptoms prevail, a decompression operation is indicated, best performed in the center of the temporal fossa, by first splitting the temporal muscle, which will subsequently serve to protect the underlying brain. It is in this location that the main stem of the middle meningeal artery will generally be found, and also through such an opening the base of the middle fossa (the most likely location of the trouble) is most accessible.

By gently elevating the temporal lobes the bloody cerebro spinal fluid may be evacuated. If bleeding continues, rubber bulbs should be introduced and brought through the incision. If after operating in this manner, upon one side the pressure symptoms are not relieved, a similar on the opposite should be performed.

The after treatment consists of the application of an ice-cap, supportive and symptomatic procedures. The outcome of these cases is not always gratifying, but operative methods offer the best at our disposal.

In writing this paper I was impressed with my hopelessness to cover my subject, only in a brief way. But often we are aroused to think of interesting details by being reminded of generalities.

The Relation of Appendicitis to Pelvic Disease.*

By H. McKee Tucker, M.D., Raleigh, N. C.

In my mind there is no doubt that there is a relation between appendicitis and pelvic disease. Lately it is the practice of gynecologists to examine the appendix when opening the abdomen for diseased pelvic organs, and some practice removing it in all cases; this, however, in my judgment should not be wholly adhered to, but should in most cases be done.

While the existence of a relation of disease between the two is held by some, others

*Read by invitation before the Seaboard Medical Society held at Kinston, N. C.

claim that the existence is imaginary, using as an argument in favor of their view that if the relation did exist the disease would be equally, if not more, frequent in the female than in the male, and say that the belief is universal that it is more common in males.

My own records would be too small for me to base an argument on, but the belief that it is more common in males is probably due to a study of the surgical record of cases and not taking into account the records of all wards of the hospital, especially the gynecological. I believe if this was done it would be found to be as common in the female as in the male.

For instance, a few years ago Kelly pointed out that after a careful study of 900 cases of appendicitis admitted to Hopkins' Hospital the disease was found to be slightly more common in males, but that the largest percentage of acute attacks was in males. This is probably explained by the fact that a large per cent. of cases are not recognized until the abdomen is opened for disease of the pelvic viscera. Very properly such should be included, although an acute attack may never have been recognized, yet the appendix found diseased. No doubt slight attacks are often diagnosed as some pelvic disturbance and not recognized, yet this mistake may, in a few instances, prove a calamity to the patient and a sore reproach to the doctor.

There is no doubt that if a comparison be made between healthy females and those who have diseased pelvic organs, appendicitis will be more common in those with pelvic disease, which, if a fact, supports the theory that a relation does exist between disease of the pelvic organs and appendicitis. Likewise, primary disease of the appendix may produce disease and suppuration of pelvic structures, although, no doubt where disease is present in both, in the large majority of cases they are independently infected.

If we accept as a fact that infection of one may in some cases lead to infection of the other, how do we explain the connection of infection?

Various writers have attempted to show that a special connection is established by a ligament running from the suspensory ligament of the ovary to the appendix. A close study of the pelvic region will show that this is an accidental ridge of peritoneum, which may run in other directions and seldom runs between these two points. So seldom is this that it will not explain the more frequent infection of one by the other organ. Embryologic study has proven that no special relation exists between the appendix and ovary, for the ovary first lies

close to the kidney and descends later. Clado and Lafforgue claim that a special connection exists between them through the lymphatic system. This is open to considerable criticism. Howard Kelly, for one, in his recent work denies this, and says that if such a communication ever exists it is very seldom and so slight that it cannot be of any account; that the lymphatics of the organs of the pelvic empty into different lymphatic glands to those of the appendix, except in the rarest exceptions, and then to a slight degree.

The relationship of contiguity is much more important in establishing a connection of disease between the two. Even in a normally placed cecum, the appendix, if long, may extend into the pelvis and be not very distant from the tube or ovary and, the peritoneum becoming inflamed, this inflammation may travel easily this distance and an infection pass from one to the other, resulting in adhesions of different viscera or even in suppuration and in establishing in rare instances communication between the cavities. New pelvic growths may push up close to the appendix and cause suppuration to take place in their cavities in case of acute appendicitis.

It is rare for the left appendages to be involved, but they may be. I recently operated on a case in which the appendix crossed over and was attached to the left ovary, which was cystic.

Rattes collected a series of 132 abscesses following appendicitis and found that pelvic abscess occurred in 40 of these, and that in 27 of these the appendix was in the pelvis. Just as infection travels from one of these organs to the other by contiguity likewise may be explained the frequent occurrence of adhesions between the sigmoid flexure and the uterine annexæ of the left side, so often seen.

If any benefits are to be conveyed to my hearers by reading a paper on this subject the greatest is to remind them of how easy in some cases it may be in the female to make a wrong diagnosis in case of pain and other symptoms referable to the lower right side of abdomen and pelvis by a careless examination; the fatality that may result from such; that sometimes, even by the most careful examination, we may err and by such error the life of our patient be sacrificed. Not only in some cases does the question of diagnosis decide for or against operation, but the route of operation. An instance of the latter might be cited in opening a secondary abscess in Douglas' cul-de-sac by the vagina, which would fail to relieve the existence of a suppurating appendix higher up. Likewise, in the removal of a suppurating organ by the vagina, you

may tear an adherent appendix, which might produce most serious consequences. Fortunately the vaginal route is becoming less and less used for operations on the pelvic organs. Therefore it behooves us in doubtful cases to give a guarded diagnosis and prognosis. The variations in symptoms of appendicitis associated with the menstrual periods may be misleading. I have seen cases in young women where it was quite difficult to be positive of diagnosis, and while I felt pretty sure the attacks were appendiceal, I must confess in some I was not positive at first, but with a careful history and examination a mistaken diagnosis should seldom be made.

In some of these there was little fever; the tenderness on pressure was as marked over the ovarian region as over McBurney's point; there was no tendency toward general abdominal pain, as is usual in appendicitis, but the pain was localized in the lower right abdomen and pelvis. The amount of menstrual flow varied. In some cases it was diminished, in some increased and in others about as usual. In some cases the attacks never occurred except at the menstrual time; in others while the attacks were more frequent at or about the menstrual period, they did sometimes occur independent of the menstrual congestion. There is no doubt that in cases of adherent appendix attacks of appendicitis are often excited by the menstrual congestion, and that these attacks are often mild and not infrequently treated for dysmenorrhea.

Feeble-mindedness and Physiologic Psychology.*

By H. O. Hyatt, M.D., Kinston, N. C.

The glory of a country is dependent on the average quality of its citizenship, and depreciates as the average is lowered. When Rome declined before its fall, there were still Romans as noble as in the days of its splendor, but the average had dropped. History repeats itself. Our own country has already proceeded such a distance on the down grade that there are twice as many defectives in this generation in proportion to population as in the last. Scientists tell us that if the present ratio of increase is maintained for one hundred years there will not be enough normal people to support the subnormal. New York is spending from one seventh to one fifth of its total resources to take care of its subnormal citizenship.

A period is imminent, such as that presented to our Anglo-Saxon ancestors, who, in addition to their periodic gathering together of the feeble minded and destroying

them, instituted laws making two hundred and twenty-three (223) offenses capital, by this means ridding themselves of a large defective population. Our forefathers knew nothing of the Mendelian laws of heredity, nor were their sensibilities as refined as ours. They were closer to Nature than we are, and whether knowingly or not co-operated with the law of the survival of the fittest.

Modern sentiment has softened our feelings to such an extent that the majority think the State has no right to take the life of a criminal. Instead of destroying undesirable we are conserving them, to the detriment of the race. This is placing before us the greatest of all the problems that has ever confronted advancing civilization. We must return to what we have grown to consider the brutish customs and laws of our ancestors, to insure us against the multiplication to a dangerous extent of the physically and mentally unfit. Or we must through education and law eliminate the scrub stock and devise better means for the propagation of the desirable units of the body politic.

As a return to ancestral customs would be a renunciation of our higher ethics, which have become so thoroughly engrafted in the minds of our more intelligent people it seems as if it would be an impossibility, the higher ethical ideas and sentiments will never change or modify the working of natural law. There is no use to make the attempt. The law being immutable we must modify social conditions so that natural law will work to our advantage and not against us.

Happily the researches of Francis Galton and the law of heredity as interpreted by Mendel, have given us an insight into what can be accomplished when the intelligent and directing forces of society are sufficiently educated to realize the impending racial peril. Feeble-mindedness must be destroyed, nor by brutal killings, nor the hangman's rope, nor by sequestering in criminal cells—an educated public opinion is now and always has been the force that leads onward and upward. This is the scientific age. The scientific spirit has taken possession of the social service workers. Everybody must be taught to know that the favorable outcome of parenthood depends upon the wise mating of men and women.

An individual's conduct determines his social status and is directed by the thoughts evolved in his own brain. An anatomically normal brain under wholesome surroundings will receive all the wholesome impressions carried to it by the organs of the special senses. An abnormal brain can neither receive nor register certain impressions that require special areas, because the

*Read before the recent meeting of the North Carolina Medical Society at Moorehead City.

areas are absent, or, to be more specific, the nerve cells are too few in number or are individually defective. The new-born child is incapable of thought. Intellectual development depends upon education, that is, past environment from which the memory areas of the central nervous system has received and recorded impressions. Said records determine what thoughts the brain will thereafter evolve. Brains identical in anatomic structure and kept under identical environment will always think the same thoughts. A difference in anatomic structure or of past environment will result in a difference in the thought product.

If we accept the foregoing conclusions as true, they bring us face to face with the proposition that size, shape, and structure only are hereditary. If breeding is directed to the development of a high grade or normal brain, we can be assured that such a brain will always produce thoughts that are in harmony with the thoughts of other normal brains under same environment.

Our means of studying the normality of living tissue is to study the product of its physiological function. The quantity secreted and the amount of the different constituents of the urine will inform us of the normality of the kidney. A radical difference in the thought product of a given brain from the thought product of other brains under same past environment will indicate a difference in anatomic structure.

The universal acceptance of the theory of mind, that is, the belief in a distinct entity that is resident somewhere in the body, has long been a stumbling block in the way of psychologic investigation. The reason for this universal belief is explainable by a natural law which we will not discuss at this time. The idea that we want to most impress is the fact that thought, a brain product, is determined by anatomic structure of the nerve cells of the brain and the records or memories left thereon by past environment.

Heredity, as it influences anatomic structure, is the prime factor in determining capacity for either intellectual or physical development. If the kidneys are imperfect, they cannot secrete the requisite amount of fluid, nor take out of the blood those elements whose elimination are so essential to physical well being.

If there is a deficiency in number, size or structure of the nerve cells, on the one hand, they are incapable of recording impressions correctly. On the other hand they are incapable of evolving thoughts that would bear a similitude to those produced by normal brain cells. This forces the conclusion that the physical structure of the nerve cells determines the capacity

of the individual's development into a thinking animal.

The researches of Mendel upon which he founded his law of heredity, as well as our researches in embryology, justifies the conclusion that perfectly normal male and female germ plasma each contain a certain determiner element for each and every tissue of the body. When these determiners are of equal potency in the male and female the blend or offspring will present the characteristics of both parents as modified by each other. Whenever there is a weakness in any special determiner in the germ plasma of one parent, the corresponding determiner in the germ plasma of the other parent will predominate, and produce in the offspring in this particular instance a likeness to whichever parent produced the stronger determiner.

If the bone determiner in the blended plasma of a tall man and short woman should be greatest in the male plasma, the offspring will be tall, and conversely if the bone plasma of the female should be strongest the offspring will be short. The same rule will apply to nerve tissue. Parents, both of whose plasma have normal nerve tissue determiners, cannot breed other than offspring of normal brains. Ofttimes a parent with normal brain tissue begets by a subnormal coparent apparently a perfectly normal offspring. This might lead to the assumption that the begetting of intelligent children was largely a matter of luck. In many families where there is a number of offspring, it is no unusual thing to see some of them very bright and others feeble-minded, all being the issue of the same pair. But for the discovery of the Mendelian law of heredity this would be very perplexing.

In the first case the begetting of offspring with normal or apparently normal brain development by a normal brained male and an abnormal or feeble-minded female, is due to the fact that the determiner for brain tissue in the plasma of the male possessed at the time more than usual potency, and in itself was sufficient to cause normal brain development.

In the second case, where some of the offspring had normal brains and others did not, we will find upon tracing parental ancestry that on both sides there had been a trace of feeble-mindedness, producing what under the old terminology was designated atavism, recession, or showing a taint in the blood.

Eugenic research demonstrates that in those cases where no weakness has appeared in five generations, the stock may be considered pure. The females of such stock could be depended on to breed normal off-

spring when mated to tainted males. A woman with five generations of normal ancestry behind her, irrespective of personal pulchritude, ought to be a very desirable mate for a man who wanted to be assured that his offspring would be normal mentally.

Wherever there is a trace of feeble-mindedness in the ancestry of both parents, if there is many offspring a certain proportion of them will hardly escape being feeble-minded. While much or most of the germ plasm prepared by the bodies of the parents will be normal, some of it will not be, and the abnormal germ plasm will surely produce abnormal progeny.

From the very commencement of life, it is the perfection or the imperfection in anatomic structure that determines normality of function. Normal and abundant kidney tissue will insure sufficient urinary elimination. The same can be said of liver tissue as to the bile. As thought production is dependent first upon normal nerve cells as registering areas for the reception of outside impressions, out of which thoughts are to be evolved, we see that here, too, functioning depends upon structure. It is physical structure that is hereditary. Thinking capacity depends upon education and environment. The finest and most perfect brain anatomically is incapable of producing any thoughts until after it has registered impressions from the outside.

It is the breeding for size and shape of the trotting horse that plays the most important role in the development of the king of the turf. It is the same rule that has brought about the development of special breeds of domestic animals.

As soon as we realize that as a distinct entity there is no such thing as a mind, that it is thinking—a progressive process that goes on during awakeness, that manifests itself in consciousness and is the directing force to what we call intellect, the way will be cleared to a more rational and scientific study of the various phases of thought activity in sanity and feeble-mindedness. When we fully realize that the nerve cell records determine the quality or variety of thought that can be produced by the brain, we at once see that if the nerve cells are absent, there can be no receptive for a sufficiency of records to produce a high quality of thinking, and that however plentiful the nerve cells may be, if the nerve cell records have been of such a nature that the thoughts evolved by them differ from the usual, we have eccentricities and insanities which can be and are overcome by educational environment—the increment of cell records producing a change in the thoughts evolved.

A careful study of brain contour by cra-

nial measurements, and testings of thought activity by the Binet system, will likely reveal many new facts from which we can formulate a rational system for dealing with insanity, eccentricities, and feeble-mindedness.

As racial development depends upon the thinking capacity of the individuals of the race, it naturally follows that our efforts to improve social conditions will most likely be followed by success only after we have carefully investigated the physical conditions necessary for thought production.

The observation of co-existing physical conditions will point the way of procedure. The general conclusion that the central nervous system is the locality of thought production is backed by so many evidences that we need not question but accept it as a proven fact. Given this starting point, it naturally follows that an inquiry into the structure of the brain is the first in order.

The elemental structure of the nervous system is the nerve cell. Anatomic research warrants the assumption that the nerve cells or neurons are divided into two systems. The recording system, consisting of the cells in the areas for the various parts of the body, and the special sense areas; in these areas are registered the records of outward impressions. It matters not how many impressions are retained on the visual, auditory and other areas, there is yet no thought. Thought is something that must be made or generated. It has to be made by something, and out of something. Experience teaches that the greater the number of past records the greater the diversity to the thought process.

Having located the registering areas, where visions are photographed and sounds phonographed, not always in notes and tones, but in whole sentences, the phonographed records of "Thou shalt not steal," "shalt not murder," "shalt not bear false witness," that are imprinted at an early date upon the auditory area of the child, when flashed into consciousness by the associative nerve cells, become a component part of his normal thinking and, as his guardian angel, keep him forever in after life in the path of rectitude. These areas are aggregations of numerous nerve cell bodies. They bring us a step nearer to the solution of our mystery.

The thinking neurons, which are mostly in the associative areas, constitute the inner temple where the cell bodies under the stimulus of an adequate blood supply generate thought. The axones of the thinking cells gather up from the recording cells impulses which are carried to the cell bodies of the thinking cells and thoughts are mediated, while the ability to think depends

upon two sets of nerve cells—the recording and the mediating. It is in the recording where the records remain. As records are increased by daily education, so is the thought process expanded. It is the acquisition of new cell records that determines intellectual growth. It is because of this that the observing individual gains more than the inattentive.

There are many psychologic facts to justify the belief that the records on the recording cells are practically permanent. We all know that when we are gaining knowledge day by day along any particular line, that our thoughts or opinions change on the particular subject as fast as we acquire knowledge of new facts.

Thinking is a continuous process, a progressive changing; while we may rethink the same thought, there is no evidence that a thought leaves any record on the thinking cells, their whole function being one of mediation.

Mechanical arrangement while forming, so to speak, the physical basis of thought, is only one of the necessary conditions for its evolution. The blood supply is of prime importance. Its vianity and quality are determining facts. In conditions of cerebral anemia, as during sleep, there is no thought or consciousness. Surcharging the blood with toxic material as in anaesthesia produces a condition of oblivion. Even the trend of thinking responds to blood conditions. Small quantities of alcohol in the blood will make the sombre and gloomy hilarious, giving a key to the reason why some people so easily fall victims to alcoholism. Disturbances in the functioning of the thyroid gland cripples the thinking capacity of the nerve cells, because of the consequent blood disturbances. Retention of elements that ought to be eliminated and absorption of intestinal toxins produces the toxic insanities. Thus we have demonstrated that normal anatomic structure and healthy physiologic function both have to be near perfection to always produce sane or sound thoughts.

As previously stated, it is size and shape and structure only that are hereditary. Thinking is an acquired function. It is an impossibility prior to birth or the reception and registration on nerve cells of impressions carried from the outside.

The wonderful Helen Keller, who was born deaf, dumb, and blind, and who has attained such great literary fame that she felt that she was in position to refuse a five thousand dollar annual endowment from Mr. Carnegie because of her ability to earn that much by her own efforts, thus describes the workings of her own brain before she was educated, her brain then being barren

of records.

"Before my teacher came to me I did not know that I am. I lived in a world that was no world. I cannot hope to describe adequately that unconscious yet conscious time of nothingness. I did not know that I knew aught, or that I lived, or acted or desired. I had neither will nor intellect. I was carried along to objects and acts by a certain blind natural impetus. I had a mind that caused me to feel anger, satisfaction, desire. These two facts led those about me to suppose I willed and thought. I can remember all this not because I knew that it was so, but because I had actual memory. It enabled me to remember that I never contracted my forehead in the act of thinking, I never viewed anything beforehand or chose it. I also recalled tactually the fact that never in a start of the body or a heart beat, did I feel that I loved or cared for anything. My inner life was then a blank without past, present or future, without hope or anticipation, without wonder, joy or faith."

"It was not night—it was not day,
But vacancy absorbing space,
And fixedness without a place,
There were no stars—no earth—no time,
No check, no change, no good, no crime."

In the study of the insanities, eccentricities, and the feeble-mindedness the physical structure of the individual is of first importance. Any imperfection in any of the organs of the special senses will prevent truthful transmission of outside impressions. Any deficiency in the special nerve areas will prevent truthful recording. A lack of a sufficiency of nerve cells in the association or thinking area of the brain will make normal thinking an impossibility. With normal anatomic conditions, the blood, the fuel furnisher of physiologic activity, must be in right condition to get the best results from cerebral activity. The whole person is concerned in thinking.

Dogmatic assertion has never been considered the best method of teaching. It is resorted to on this occasion, because the time of this Society is limited. The time that would be required for a presentation of the facts and the reasons why of these conclusions would be long and tedious. If these conclusions are logical, they will gain acceptance. If not, they may excite controversy during which there will be a marshaling of physiologic and psychologic facts for and against. Out of the contention we may find some thing that will bring us nearer the solution of the problem. A rational verdict requires the sifting of testimony. No theory is worthy of acceptance that does not account for all phenomena concerning it. I am not asking acceptance

of this theory until after it has been submitted to most rigid scrutiny. If the correlation existing between the anatomic arrangement of the neurons and the known facts concerning the effects of education upon the thinking faculty of the individual do not justify our conclusion this theory is wrong. If they do, it may be right.

The points which seem to me to be borne out by facts are: Size, shape and structure only are hereditary; that impressions are carried from the outside and registered on the nerve cells; that under a sufficient blood supply other nerve cells in the association area mediate these impressions into thought.

Aseptic Abortion at or About the Third Month.*

By Virginius W. Harrison, M.D., Richmond, Va.,
Associate in Obstetrics, Medical College of Virginia.

By aseptic abortion I mean one that is produced by internal causes existing at the time of the abortion in contradistinction to those produced by the introduction and infection of the uterine contents by germs from without the body carried into the uterus by mechanical or other means.

Ætiology.—The causes of abortion may originate in the foetus, the mother or in the father, and possibly by external violence.

Paternal Causes.—Syphilis, alcoholism, tuberculosis, all play their part in being an agent of foetal disaster; the discussion of the methods by which they accomplish this result will take a longer time than I care at this time to occupy.

Maternal Causes.—A retroflexed, pregnant uterus may become impacted in the pelvis, and during its growth may mechanically interfere with further development, though this is the unusual way. More frequently it produces abortion in one of the following ways, viz.: It disturbs the uterine and pelvic circulation producing chronic endometritis with hemorrhage into the decidua; or a chronic metritis may have produced the retroflexion and this in turn the abortion. Among other maternal causes that may be mentioned are a chronic endometritis from a retained decidua of a former improperly treated abortion; any acute peritoneal infection, as appendicitis or salpingitis; malformations, infections or tumors of the uterus; infectious diseases of the mother which infect or otherwise contribute to the destruction of the life of the foetus, as pneumonia. General sepsis, a sudden, high temperature, anemia, gonorrhoea and syphilis may also be added to the list of causes.

According to some authorities, external trauma plays a very small part in the production of abortion, since many operations on the uterine adnexa as well as the uterus itself, have been done without terminating pregnancy; even a curettage has been done and labor took place at the end of term.

From a medico-legal standpoint, it may be important to say that an abortion was the direct result of an accident. It will be hard to disprove that any accident might not have been a contributing, if not an actual, cause. To be absolutely certain that the accident was the sole cause, we must find that the foetus is microscopically and macroscopically normal; and no disease must be found in the placenta or other foetal appendages; neither must there be present any pathologic condition in the mother that could have been an etiological factor. Only under these conditions can we say positively that the accident was the sole cause.

Prolonged anesthesia may be the cause of foetal death and thereby be a cause of abortion. Extraction of teeth has been for a long time considered as contra-indicated in pregnancy, yet one dentist has reported 12,000 administrations of nitrous oxide with removal of teeth without an abortion.

Fetal Causes.—Diseases of the placenta, cord, amnion, chorion, or, in short, anything that will prevent the growth and development may be the cause of abortion.

Conditions in utero at the third month: "At the end of this month the entire product of conception is about the size of a goose's egg, and the embryo measures from 7 to 9 cm. in length. Centers of ossification have appeared in most of the bones; the fingers and toes become differentiated and are supplied with nails; the external genitalia are beginning to show definite signs of sex" (Williams). We find at this time that the placenta is fully developed and firmly attached, and is the important factor in the treatment of abortion at this period of pregnancy, and upon our judgment of the ability of nature to deal with the after-birth will we decide all questions of the treatment of incomplete abortion.

The indications and contra-indications for the treatment of abortion, as in all other surgical conditions, can be stated with a fair degree of positiveness; yet there are, at times, cases that will require a nice degree of judgment as to which method will be best adapted to some special case.

In considering abortion, we must think of threatened abortion and how we can prevent it; of inevitable, and the best means of conducting the case to a safe and successful termination. We must also consider if this termination of pregnancy was crimi-

*Read before the Richmond Academy of Medicine and Surgery.

nally produced and thereby likely to be septic. Again, we must determine if it is a complete or incomplete abortion, and, finally, if the case can be handled better by nature than by artificial means.

Usually, at our first visit, we are met with a ready-made diagnosis of abortion, but the patient has not been wise enough to save the discharges from the vagina so that we could have the most important means of deciding what the further treatment should be. However, this may be determined by the history of the number of months of suppressed menstruation in a regularly menstruating woman and by a bimanual examination of the uterus made with the greatest care and gentleness, so that if there is only a threatened abortion you will not disturb the uterine contents nor increase the uterine contractions and hemorrhage. By this examination we can determine the size of the uterus, if the contractions are continuing, the consistency and dilatibility of the cervix, if the cervical canal is shortened and if any of the fetal appendages are within reach and detached. We can also ascertain the amount of hemorrhage and the approximate time the uterus will require to deliver itself, or the ease with which the placenta can be delivered artificially if, in our judgment, this is indicated.

In a complete abortion, by the above-named examination, we will find that the cervix is contracted or contracting with a very little blood flowing through the vagina, and the uterus smaller than we would expect at this period of pregnancy.

In an incomplete abortion, that is, where the fetus has been expelled but the placenta remains within the uterine cavity, the cervix will be found unusually soft and somewhat dilated; the contractions may have subsided and may or may not reappear. If the placenta is firmly attached, we will have very little discharge of blood. This same condition has been observed frequently when the after-birth was completely detached and the uterus firmly contracted. Ordinarily, however, we find the cervix dilated, the uterus much enlarged and the membranes presenting in the external os.

To prevent repetition I advise that all obstetric examinations should be carried on as in any other major surgical operation as regards the use of rubber gloves, the asepsis of the hands, instruments, dressings and the patient herself.

The indications for the treatment of abortion will be considered by a report of cases attended by me in the past few months.

CASE 1.—Mrs. T., aged 36, mother of two children. Has had three abortions in past three years. Threatened abortion. Pains for two days, no hemorrhage. Put

to bed, $\frac{1}{2}$ grain of phosphate of codeine administered every four hours until contractions ceased. Bowels were emptied on third day by an olive oil enema. After one week in bed patient was up, and, so far, no return of pain. No vaginal examination was made for fear of increasing the uterine contractions or exciting hemorrhage.

CASE 2.—Mrs. C., aged 23. First pregnancy. Hemorrhage considerable, with frequent uterine contractions. Diagnosis: Inevitable abortion, with entire ovum in the uterus. Treatment: Vagina packed with gauze, and allowed to remain for twenty-four hours; on removal, the cervix was found somewhat dilated, the foetus was felt in, and removed from, the softened and shortened cervical canal. Bleeding was still quite free and the placenta unattached; the gauze packing was again resorted to and allowed to remain another twenty-four hours when, on its removal, the remnant of the abortion was easily removed with placental forceps.

In this case, the active hemorrhage was the indication for treatment. Had it not been for this, the case would have been left to nature until she had shown herself unable to accomplish the task undertaken. My rule is to do nothing until expediency demands assistance. Exceptionally we may change this treatment, that is, when the patient is remote from medical aid, and pack the patient with gauze when there are neither active pains nor hemorrhage, provided we are sure the abortion is inevitable, as, for example, when the "waters" have broken.

If the case is left to nature, and the patient has a chill followed by an elevated temperature of 100, or if hemorrhage is not controlled by the gauze pack, then immediate emptying of the uterus is demanded with suitable conditions and assistance, and the obstetrician is capable of doing an instrumental curettage. This latter requires expert knowledge to perform correctly, and should not be done with a metal curette if it is possible to use the finger; and if a metal curette is to be used, the greatest care should be exercised.

CASE 3.—Mrs. DeV., aged 35, reached Richmond with a ruptured appendiceal abscess, with a large quantity of free pus in the abdominal cavity. Was operated on by Dr. Hugh M. Taylor. On the third day the nurse reported a free hemorrhage from the vagina. Was referred to me for examination. In the clots was found a three and a half months' foetus; no bleeding. Owing to the recent operation and the patient having drainage tubes in the pelvis, nature was given the opportunity of finishing the delivery, which she did on the

seventh day. The patient made a good recovery, and was more pleased with losing the foetus than her appendix. This case illustrated how well nature can work even under the most unfavorable conditions. Art might have killed the patient by renewing and spreading the already localized infection in the peritoneal cavity.

CASE 4, referred to me by Dr. W. S. Gordon, illustrates another way nature may behave, slow, yet sure. Mrs. A., aged 42; no abortions; three children; myxedema. When first seen was having a severe uterine hemorrhage. Examination of clots discharged showed them to contain a foetus of about three and a half months. On vaginal examination the membranes and a part of the placenta were found in the cervix. The removal of the portion of the placenta checked hemorrhage, and the case was left in charge of a nurse. The second night hemorrhage was again free, and another portion of the placenta was removed, leaving a portion which nature delivered at the end of one week. This patient had a temperature of 100 degrees when I first saw her, and never went above that point. Had she not been a weak, sick woman at the time I saw her, I would have attempted to deliver the placenta at the second free flow of blood.

CASE 5.—Mrs. C., aged 40 (?), had several children and a few abortions. Abortion of about three months was brought on by being greatly excited over becoming a grandmother, her daughter being in labor in the next room. This case was seen with Dr. Hugh M. Taylor. The uterine contractions and hemorrhage subsided soon after the expulsion of the foetus and was left to nature. On the third night the patient had a chill, and temperature was elevated to 100 degrees. The next day Dr. Taylor dilated the cervix and removed the detached placenta with a metal curette which was used more as a forceps to tease out the placenta than to curette the uterus. The temperature returned to normal in a short time after the removal of the after-birth. Had this been a streptococci infection, a curette would only have opened new avenues of entrance and the patient would have been made worse. The two great indications for interference are hemorrhage and elevated temperature.

CASE 6.—Mrs. P., aged 33; two children and one abortion; was threatened with a four months' abortion. Opium and rest did not control. The waters broke. On vaginal examination the foetus was found to be transverse. The vagina was packed to wait for further dilatation of the cervix before trying to remove the dead foetus. This was accomplished the next day with great diffi-

culty, as the foetus was so macerated that it had to be taken out one portion at a time. Hemorrhage was great, so my gloved hand was introduced into the vagina and the placenta peeled off. To do this, the free hand making downward pressure on the uterus from without was a great assistance and did away with the use of the metal curette.

CASE 7.—Mrs. H., aged 27; first pregnancy. Conditions were practically the same as in case 6, except I had to deliver through an undilated vagina; and in extracting the foetus, it separated from its head which, with some portion of exposed bone, cut the perineum into the rectum. The head was very hard to deliver, and was only accomplished by compression with the placental forceps. I was especially impressed with how much more the cervix contracted in this primipara, during manipulation, than it did in the case of the one just mentioned, who had had children. The injury being complete to the perineum, it was thought best to extract the placenta and repair the perineum at one time than to leave the case for nature to complete the delivery.

In conclusion, I wish to emphasize the responsibility of the obstetrician when called to see a woman with pain and hemorrhage from her uterus. She demands our best judgment and treatment, based on our thorough study and observation of the subject, equal to that given to surgery or any other major specialty, for masterly inactivity when activity is a saving measure, is only equal in criminality to masterly activity when no activity is justified.

401 North Allen Avenue.

Work with the Feeble-minded in North Carolina a Comparative Study.*

By Ira M. Hardy, M.D., Superintendent and Founder of the North Carolina School for the Feeble-Minded. Member of the Beaufort County Medical Society, The North Carolina Medical Society, The Seaboard Medical Society, The Tri-State Medical Society, The Southern Medical Association, The American Breeders Association, The Southern Sociological Congress, etc.

In speaking on the subject of feeble-mindedness in North Carolina and its probable extent, I have concluded that, in the absence of accurate statistics relating to the same, and also in view of the further fact that as yet we have had no institutional experience in this State, as regards the custodial care and systematic training of this class of unfortunates. The North Carolina School for the Feeble-Minded, located near

*An Address before the Ninth Annual Meeting of the American Breeders Association at Columbia, S. C., January 24th, 25th, 27th, 1913.

the city of Kinston, the buildings, etc., of the same are now in the course of completion, and the opening for the reception of pupils will not take place until the legislature appropriates more money. Therefore, although in charge of this still inchoate institution, I have no data or statistics to offer in connection therewith, other than those of a general character relating to the question of feeble mindedness in my State, which has been worked out by the aid of the field-worker.

Any further general remarks in regard to the same, I think it best to hold in abeyance until after I have presented you an outline history of a family with feeble-minded and normal-minded branches—indigenous to the Colonial State of New Jersey. It applies equally as well to the other Colonial States, and especially to North Carolina, and gives one a better idea of the causes, trend and extent of mental degeneracy, than any soluminous theories or arguments, based on general statistics and speculative data. In other words, I am going to present to you, instead, a most unfortunate story of American family life, in which nearly 1200 descendants figure through some six generations. It carries back to Colonial Days, when the population of this country was about 3,000,000 souls, widely and sparsely distributed throughout the thirteen colonies. The people then were almost wholly of British extraction—English, Scotch, Irish and Welsh stock—with moderate scattering of German, Dutch, Scandinavian and French settlements.

All of these were largely homogeneous, and of the sturdy pioneer element—men and women founding new homes in the wilderness—and representing the brain and brawn of the Old World. We would hardly look here for any serious mental and physical defectiveness, except through exposure, overwork, disease, isolation, or environment, and very little of it even through these circumstances, and scarcely through hereditary influence. People, as a rule, who migrate from established homes in the older countries, to found new ones in the primitive wilderness of other lands, are not by any means abnormal men and women. The very effort of change—to better their condition—would indicate something even above the average normal type. The latter is conservative in nearly all its instincts and qualities, while the former more largely inclines to the positive—the forceful. This is about the usual idea entertained about our Colonial progenitors, and beyond question is more largely true of the type than otherwise, and yet it had its exceptions.

Young men of good family, living in the

days of the Revolution, considering their environment, were not one whit worse or better than the average of such young men of today, with the increased temptations and allurements of a more complex social life. By good family, I do not mean wealth and social position, but one that represents the better elements, as exemplified in a moral, orderly and regular life. This is fair representation of the average family of the middle class in Colonial and Revolutionary times. Above this type, we have what may be called the ultra class, rich, socially and politically dominant, and below it, the lower stratum of society. These two stratas are largely responsible, in all times and countries, for the reproduction of abnormal types of humanity, and our country, even in its Colonial and Revolutionary history, has not been exempt from this blighting influence.

The story which I have in point, illustrating the descent of feeble-mindedness through heredity—not from environment or otherwise—is that of Goddard's Kallikak Family, of New Jersey, but which in its ramifications of descent spreads over most of the old original colonies. Fourteen years or more have been expended in study and research with regard to its origin and history, its lineal and marital descent; and all that science can furnish as to exact tests, constituting normal and abnormal humanity, have been employed in the most careful and painstaking manner. It is, really, the first practical study on a scientific basis, in this country, of human heredity. We have had many such studies of animals and plants, but none so thorough, reliable and scientific as this of the genus homo.

Before proceeding with the story proper, I will simply outline its argument, by stating that a young man in Revolutionary days, a soldier in the Continental Army, became through two women the ancestor of two lines of descendants. He was the scion of a good family of the middle class. The one woman to whom he was not married was feeble-minded; the other woman, who was his wife, was normal, and of descent equal to that of his own—of good reputable citizenship. The other line was generally characterized by mental defect in every generation. This mental defect was transmitted through the father in the first generation. In later generations, more mental defectiveness was brought in from other families through marriage. In the last generation it was transmitted through the mother, so that we have here all the combinations of transmission, which proves the truly hereditary character of the mental defect. The investigation shows, on the good side of the family, prominent people

in all the walks of life, and on the bad side of the family, we find paupers, criminals, prostitutes, drunkards, and examples of all forms of social pest with which modern society is burdened.

The author of this most thorough study into the heredity of feeble mindedness—"The Kallikak Family"—is Dr. Henry Herbert Goddard, the Director of the Research Laboratory of the Training School for the Feeble-minded, at Vineland, New Jersey—a man of fine scientific attainments and a recognized authority upon the subject of mental defectiveness. I will give a brief outline description of this family, as far as possible, in the author's own phraseology, so as to make it authoritative. But in this connection, it may be well to state that my comments on the same, especially so far as they may relate to similar families in North Carolina, will be reserved for the conclusion of this address:

On September 15th, 1906, at the Training School for Backward and Feeble-Minded Children, Vineland, New Jersey, a beginning was made in the study of the mental condition of the children who lived in that institution.

The mental and physical peculiarities of the different grades and types were determined, and an accurate record of the deficiencies of each child was kept. These were correlated with the condition of the nervous system, and in cases of death, autopsies were made, with the view of determining the cause of feeble-mindedness.

But after much tentative or preliminary work, it was decided by Dr. Goddard and his colleagues that the only way to get the information needed was to send trained workers to the homes of the children to learn all the facts that could be obtained. They did so, and the results were the studies of more than 300 families, which show that about 65 per cent. of the children of the same are of hereditary taint.

The study of the Kallikak Family, especially, is a genuine story of real people, the name alone being fictitious. This family was a most notorious one. The community in which the present generations live, know the latter well. It also knew their parents and grandparents. Indeed, the older members of the community knew them farther back, because of the reputation they had always borne.

Fourteen years ago, last October, Deborah Killikak, eight years old, was placed in the Training School for the Feeble-Minded, at Vineland, New Jersey. She was born in an almshouse, of a mother who afterwards married a man who was not her father, but the progenitor of her mother's prospective child. With four or five other children,

whom the fathers refused to support, she remained in the almshouse until she was eight years old, on the plea of her mother and others that she was feeble minded.

Deborah gained admission to the New Jersey Training School in the year 1897. Extracts from her admission blank give the following negative and positive qualities: "Average size and weight; staring appearance; jerking movement in walking; mouth shut; cannot fasten her clothes; not obedient; cannot read or count; power of memory poor; can throw, but cannot catch ball; excitable and noisy; careless in dress; obstinate and destructive; does not mind; slaps and scolds; grandmother deficient; grandfather periodical drunkard and mentally deficient."

Fourteen years of training show the following changes in Deborah: "She is cheerful, inclined to be quarrelsome—very active and restless; very affectionate, willing and tries to do things. She is quick and excitable, fairly good tempered. Learns a new occupation quickly, but requires half an hour or 24 repetitions to learn four lines. She retains well what she has once learned; needs close supervision; is bold with strangers; kind towards animals; can run an electric sewing machine, cook and do practically everything about the house. Has no serious defect; is quick and observing; has a good memory; writes fairly well; does excellent work in wood-carving and in the kindergarten. She is also an excellent imitator, but a poor reader and poor in numbers; in music excellent; in entertainment excellent. She is very fond of children and is good in helping care for them; has a good sense of order and cleanliness, but is not always truthful. She has been known to steal, although does not have a reputation for this. She is proud of her clothes; likes pretty dresses, and likes to help in other cottages, even temporarily to taking charge of a group."

With all of her achievements in the way of physical and mental development through years of systematic training, to sum the matter up, Deborah Killikak, according to Dr. Goddard, is a typical illustration of the mentality of a high grade feeble-minded person—the moron, the delinquent—the kind of girl or woman that fills our reformatories. They are wayward; they get into all sorts of trouble and difficulties, sexually and otherwise, and yet we have been accustomed to account for their defects on the basis of viciousness, environment or ignorance.

He says her history is also the history of the same type of girl in the public school. Rather good-looking, bright in appearance, with many attractive ways; the teacher

clings to the hope, indeed, insists that such a girl will come out all right. Our work with Deborah convinces us that such hopes are delusions.

Dr. Goddard, in reviewing this case, continues: "Here is a child who has been most carefully guarded; she has been persistently trained since she was eight years old, and yet nothing has been accomplished in the direction of higher intelligence or general education. Today, if the young woman was to leave our Institution she would at once become a prey to the designs of evil men or evil women, and would be vicious, immoral and criminal, though because of her mentality she herself would not be responsible. There is nothing that she might not be led into, because she has no power of control, and all her instincts and appetites are in the direction that would lead to vice."

"We may now repeat the ever insistent question; How do we account for this kind of individual? The answer is in a word—heredity. We must recognize that the human family shows varying stocks or strains that are as marked, and that breed as true as anything in plant and animal life."

"In order to determine the mental condition of Deborah Killikak's ancestors, the first visit was made to the woman who had interested herself in the child and its mother when the latter had just given birth to Deborah in the almshouse. The present family of Killikak was found living within twenty miles of what was afterward learned to be its ancestral home, and in a region that was neither the slum of a city, nor the wild desolation of the extreme rural community, but rather in the midst of a populous farming country—one of the best districts in the State."

"The Killikak family, in the midst of these favorable surroundings; had always been notorious for the number of defectives and delinquents it had produced, and this notoriety made it possible to trace it back six generations."

"It was determined to make a survey of the entire family and to discover the condition, as far as possible, of every member in each generation. The surprise and horror of it all was, that no matter where we traced them—whether in the prosperous rural district, in the city slums to which some had drifted, or in the more remote mountain regions, or whether it was the second or the sixth generation—an appalling amount of defectiveness was everywhere found."

"In the course of the work of tracing various members of the family, the field-worker occasionally found herself in the midst of a good family of the same name,

which was apparently in no way related to the girl whose ancestry we were investigating. These cases, however, became so frequent that there gradually grew the conviction that Deborah must be a degenerate offshoot from an older family of better stock. Definite work was undertaken in order to locate the point at which the separation took place."

Through freshly discovered facts, it was found that the great-great-grandfather of Deborah was Martin Killikak. "We had also traced the good family, before alluded to, back to an ancestor belonging to an older generation than this Martin Killikak, but bearing the same name. He was the father of a large family, and his eldest son was named Frederick, but there was no son by the name of Martin. But subsequently, a granddaughter of Martin informed us, that Martin had a half-brother named Frederick, and never had an own brother. She simply said: "His mother had him before she was married." Deeper scrutiny into the life of Martin Killikak, Sr., was made possible through well-preserved family records.

When Martin, Sr., of the good family, was a boy of fifteen, his father died, leaving him without parental control or oversight. On his majority, he enlisted in the Continental Army, and when quartered at a country tavern, met a feeble-minded maid by whom he became the father of a feeble-minded son. This illegitimate boy was Martin Killikak, Jr., the great-great grandfather of Deborah, and from him have come 480 descendants, of whom 140 were and are feeble-minded, while only 46 have been found normal. Among these 480 descendants, 36 have been illegitimate; 33 sexually immoral, mostly prostitutes; 24 have been alcoholics; 3 epileptics; 3 criminals; 8 kept houses of ill-fame; and 82 died in infancy.

These people have married into other families, generally of about the same type, so that we now have on record and charted 1146 individuals. Of this large group, we have discovered that 262 were and are feeble-minded, while 197 are considered normal. The remaining 581 are still undetermined. This means that as yet nothing definite is known about them.

According to Dr. Goddard, we have here a family of good English blood of the middle class, settling upon the original land purchased from the proprietors of the State in Colonial times, and throughout four generations maintaining a reputation for honor and respectability of which it is justly proud. Then a scion of this family, in an unguarded moment, steps aside from the paths of rectitude, and with the help of a feeble-minded girl, starts a line of mental

defectives that is truly appalling. After this mistake, the young man returns to the traditions of his family, marries a woman of his own quality, and through her carries on a line of respectability equal to that of his ancestors.

We thus have two family series from two different mothers, but one father. These extend for six generations. "Both lines live out their lives practically in the same region and in the same environment, except in so far as they themselves, because of their different characters, changed that environment. Indeed, so close are they that in one case a defective man, on the bad side of the family, was found in the employ of a family on the normal side, and although they are of the same name, neither suspects any relationship."

In fact, it is almost axiomaticly claimed that no amount of education or good environment can change a feeble minded individual into a normal one, any more than it can change red haired stock into black-haired stock, but systematic training, if it cannot fairly strengthen and improve the enfeebled mind, can, at least, vastly improve the condition of its possessor, making him or her more content, useful and happy. This, the training which Deborah Kallikak received splendidly illustrates, even though she fails to show the improvement in mental capacity expected. But this is not the point which the Doctor so clearly means to illustrate, and that is, the direct and indirect descent of feeble-mindedness through heredity, ignoring all other causes of it, for the purpose of demonstrating it *defacto* in the case of Deborah Kallikak. He has accomplished this in a most admirable manner, both scientifically and historically.

Dr. Goddard claims that Deborah Kallikak belongs to that type of feeble mindedness that is high grade or moron, and that all the facts go to show that this type of people makes up a large percentage of our criminals. He brings in as an illustration in point, that the children in our public schools, who cannot learn the tasks given them, because through their mental defects they are incapable of mastering abstractions. They never learn to read sufficiently well to make reading pleasurable, or of practical use to them. The same is true of number work. He thinks that under the compulsory system in vogue in the several States, and in the present course of study, we compel these children to go to school, and attempt to teach them the three R's, and even higher subjects. Thus they worry along through as few grades as possible, until they are fourteen years old, and then leave school, not having learned anything of value, or that can help them to make

even a meager living in the world. They are then turned out inevitably dependent upon others. A few have relatives who take care of them, see that they have to do something which perhaps will help in their support, and then these relatives supplement this with enough to insure them a living.

A great majority of these morons, according to Goddard, not having such interested or capable relatives, become at once a direct burden upon society. These divide, according to temperament, into two groups. Those who are phlegmatic, sluggish, indolent, simply lie down and would starve to death, if some one did not help them. When they come to the attention of charitable organizations, they are picked up and sent to the almshouse, if they cannot be made to work.

The other type is of the nervous, excitable kind, who try to make a living, and not being able to do it by a fair day's work and honest wages, attempt to succeed through dishonest methods. These become the criminal type. The kind of criminality into which they fall seems to depend largely upon their environment. If they are associated with vicious but intelligent people, they become the dupes for carrying out any of the hazardous schemes that their more intelligent associates plan for them. Because of their stupidity, they are very apt to be caught quickly and sent to the reformatory or prison.

Again, he says that if they are girls, one of the easiest things for them to fall into is a life of prostitution, because they have the natural instincts with no power of control and no intelligence to understand the wiles and schemes of the white slaver, the cadet, or the individual seducer. All this is what is to be expected. These people are of good outward appearance, but of low intelligence, who pass through school without acquiring any efficiency, and then go out into the world, and must inevitably fall into some such life as has been pictured.

In speaking of the institutions provided for the delinquent classes, he claims that they have not yet been sufficiently investigated, and that we have not adequate statistics to show what percentage of their inmates is actually feeble-minded. But even casual observation of our almshouse population shows the inmates to be decidedly low mentally, while careful tests would undoubtedly increase the percentage very materially.

It is said that in many of our public hospitals, may be found a group of people whom the physicians will tell you are only partially demented. The fact is, they probably belong in an institution for the feeble-minded, rather than in one for the insane,

and have gotten into the latter, because "an unenlightened public does not recognize the difference between a person who has lost his mind and one who never had one."

In regard to criminality, Dr. Goddard says we now have enough of studies to make us certain that at least 25 per cent. of this class are feeble-minded. "Of the 100 admissions to the Ruhway, New Jersey, Reformatory, at least 26 per cent. of them are feeble-minded, with certainty that the percentage would be much higher if borderline cases were included. Of 100 Juvenile Court Children in the Detention Home of the City of Newark, New Jersey, 67 per cent. showed that they were distinctly feeble minded. From this estimate are excluded children yet too young to know definitely whether they are cases of arrested development or not." An examination of 56 girls from a Massachusetts reformatory, but out on probation, showed 52 of them to be distinctly feeble-minded. They were girls who could not be made to stay in the homes that were found for them, nor to do reasonable and sensible things in those homes, which fact of itself pointed toward feeble-mindedness.

The foregoing figures are based on actual test-examinations as to mental capacity. Indeed, it is authoritatively stated that it would not be surprising if a careful examination of the inmates of the reformatories of the United States should show even 50 per cent. of them to be distinctly feeble-minded. Respecting prostitutes, he says that we have no reliable figures. The groups of girls already noted included among their number several that were already known as prostitutes. A simple observation made by any intelligent person, of the girls leading this sort of life anywhere, will satisfy him or her that they are defective mentally.

The facts revealed in the study of the Kallikak family drives Dr. Goddard almost irresistibly to the conclusion that before we can settle our problems of pauperism and criminality, and all the rest of the social problems that are taxing our time and money, the first and fundamental step should be to decide upon the mental capacity of the persons who make up these groups. He says we must separate, as sharply as possible, those persons who are weak-minded and therefore irresponsible, from intelligent criminals. "Both our method of treatment and our attitude toward crime will be changed when we discover what part of this delinquency is due to irresponsibility."

He very pertinently asks: "Why do we not do something about this problem of

feeble mindedness, and what can we do about it? He then proceeds to answer both questions by saying that the low-grade idiot—the loathsome unfortunate—may be seen in our institutions, and that some have proposed the lethal chamber for him. But humanity is steadily tending away from the possibility of that method, and there is no probability that it will ever be practiced." However, he continues "The low-grade idiot is not our greatest problem. He is, indeed, loathsome; he is somewhat difficult to take care of; nevertheless he lives his life, and is done. He does not continue the race with a line of children like himself. Because of his very low-grade condition, he never becomes a parent. It is the moron type that makes for us our great problem. And when we face the question of what is to be done with such people that make the large proportion of the bad side of the human family—then, we realize that we have indeed a huge problem that looms above all other social problems."

It has struck me, in the course of the review of this most excellent work, that the Colony and State of New Jersey was not unique in the possession of the Family Kallikak. That the other original Colonies, afterwards formed into States of the Union, including North Carolina and its contiguous sisters, had samples of like families, but probably more segregated and isolated, in many instances, and of different environment, but answering to the same type in other particulars.

The idiosyncrasies peculiar to them in some respects may be more marked, perhaps, up to 30 or 40 years ago, than at the present. In fact, prior to the Civil War, and during the existence of slavery, the South, from its sharply drawn and widely separated social lines, the segregation, if not isolation, of its wealthier and poorer classes of whites, was probably very prone to breed such defective stock, though not any more so through heredity by intermarriage of blood relationship, disease, etc., than other coast and mountain regions of the country.

Taking the extreme range coastward from New England, through New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina and Georgia to Florida, we have types of families so closely resembling each other in mental, physical and other characteristics, that State lines hardly divide them except in *patois*, mannerisms, etc: They seem, taken altogether, to be one great family even if not entirely homogeneous in their domestic ways of life. They have intermixed largely among themselves, and in consequence have produced very marked types of the older and younger native American, good, bad and indifferent

—embodying all the causes which tend to produce mental and physical degeneracy—as well as normality of mind and body.

The same may be remarked of the mountainous region, extending from Pennsylvania through Georgia, which, like the coast strand, has been more or less segregated and isolated—intermarriage of the people within themselves, producing as peculiar and distinctive types of the native American as that of the sea coast region itself. Between these two widely varying but narrow extremes of territory, we have a wide plateau of equal length, more or less well settled with the same original elements of the average normal native American type, that in no way differs essentially from its confreres in the north, east, or central west, in which the native element still predominates to a moderate extent. It may differ provincially, that is, in peculiarities of speech, manners and customs, but it is to all other intents and purposes homogeneous.

This is probably more in evidence south of Mason and Dixon's line than north of it, for the reason, that as yet, there has been but little intrusions of the foreign element in its midst. However, prior to the middle fifties, and immediately after the Civil War, there had been more or less migration from the older States north of us, which added good fresh blood of the native kind to that of the land to the southward.

In outlining geographical, if not ethnological, divisions of this character, in a tentative way, the object is to arrive at the territory in which feeble-mindedness is the most fruitful, and as to the causes which produce it. On both hands, as pictured, we have narrow lengthened stretches of country, which by their surface configuration—water and swamp to the eastward, and mountains to the westward—are natural barriers, encouraging the segregation and isolation of people. These impediments to wider social intermingling, indirectly, if not directly, work for closer ties on the part of the citizens of such territory, which terminate in the vast intermixture of intimate blood relationship through marriage, thus begetting various degrees of mental and physical abnormality in the progeny.

The plateau region referred to, from its more general intercourse with the rest of the country, its great churches, larger and more numerous schools, its more intimate roadway, railway, telegraph and telephone service, brings it into quickened contact with like outside people. All this, with the wider spread of general intelligence, due to the press and the library in its midst, tends to broaden and deepen human knowledge, quicken morality and anchor religion on a more efficient and enduring basis. The

mating in marriage among its younger people is also more natural and rational, and less prone to the production of feeble-mindedness in the progeny.

It should be understood that I am simply speaking in the comparative and relative sense, without historic, scientific, or other data than that which observation and experience furnish me. In other words, I am endeavoring to reach the larger cause of abnormality through heredity in the region with which I am more directly concerned, and that is the grand old State of North Carolina. The more intelligent "Tarheel" knows that in his State its narrow seaboard and mountain stretches are likely to be productive of more human abnormality than its wider plateau region, through their very physical inequalities, resulting in the comparative isolation of their respective settlers. This of itself likely causes more or less frequent intermarriages among themselves, which while producing certain distinctive types of average normality, at the same time—where the blood relationship is more immediate—gives rise to much mental and physical abnormality. The taint of the latter, doubtless, could be traced through many generations, had we the facilities for such work that are now available in the public institutions of the more advanced States, in which investigations of this nature are now going forward.

It is true we have a few reformatories, orphanages, but no juvenile courts, houses of detention, or probation system. Even if we had them, under existing conditions, research, especially in a scientific way, would be valueless in the absence of continued test-examinations of their changing inmates. The same can be remarked of our alms houses, jails and prisons, and even of our public schools. In all these institutions, there is a certain percentage of irresponsible mental backwardness or degeneracy. As yet, we have no determinative official method of getting at the actual percentage of the mentally backward or feeble-minded within their purviews.

Such being the condition of affairs, I am unable at this time to speak authoritatively of the extent of feeble-mindedness in North Carolina. I know, however, through the efforts of our field-worker, through inquiries, by correspondence and otherwise, as well as from years of medical practice prior to my becoming connected with the North Carolina School for the Feeble-Minded, and since, from my own personal and official knowledge, that we could fill this institution, when completed, many times over with mental degenerates of the various grades, and not care for half we have.

Taking the generally accepted basis of

estimate, of one feeble-minded person in every 500 of population, we would have, within the limits of the State on the basis of a white census of 1,500,000 souls, at least 3,000 mental degenerates, exclusive of the actual insane. This estimate is probably rather under than above the actual number, for according to recent investigations in other States, the ratio has been found to be one in every 300 of population. But this, as a matter of course, is not based wholly upon the native white population, as is the case with the Old North State. If we were to take the inmates of the alms-houses, prisons, etc., on the basis elsewhere current for the feeble minded—25 per centum—it would probably swell the number considerably; also if we were to include the mentally backward children in our public schools.

The question naturally occurs: what are we doing in the way of proper institutional care and training for this large army of mental degenerates? Speaking for my State, I can only point to the North Carolina School for the Feeble-Minded, located near Kinston, the buildings for which are nearing completion, and which is expected to open when proper legislative assistance comes to us. Its work will be comprehensively humane and on the lines of common sense, as approved by positive science and actual experience.

Thus, in a general way, I know that feeble-mindedness in my State is considerable, and probably largely due to the laxity of the laws, which should govern our moral, spiritual and physical. In order to combat this growing tendency toward mental and other degeneracy, we should first concert measures to prevent its victims from receiving and doing further harm by placing them under custodial care and systematic training. After we have accomplished this, additional measures should be taken to prevent the propagation of feeble minded children. This latter question of human conservation goes to the very foundation of life itself, and involves a radical change in our marriage system, to the end that none but the normal of the sexes should mate in wedlock.

The latter is one of the greatest sociological problems of the time. Whether it will be even approximately solved in the near or distant future almost answers itself. Its solution, in any manner or form, in the early time to come, means an ultra-radical change in the sentiment of the great mass of the people, which is impossible of accomplishment, except through the long and tedious process of education. The mass of the people are still too unenlightened on this subject to take up and understand the abstract

scientific part of it. Apparently, all that we can consistently do now, and find popular support in: the doing of it, is to take care of the feeble-minded that we have with us, by colonizing or segregating them where they will do no harm to themselves or the community, and where they will be made measurably content, happy and mostly self-sustaining.

I have planned the North Carolina School for a capacity of 600. By the time this is completed her citizenship will know whether they will march onward—or retreat.

Osteomyelitis.*

By Eugene B. Glenn, M.D., Asheville, N. C.

Mr. President and Gentlemen of the State Society:

I wish to invite your attention to a brief review of the literature on osteomyelitis and report of a case of the suppurative type.

Osteomyelitis is an inflammation of the medullary canal and the tissues lining the cancellous portion of the bone and may present itself as simple, acute, acute infective, and chronic osteomyelitis. These are clinical varieties and probably all depend upon the action of pyogenic organisms, controlled by the individual resistance of the tissues to the infection.

According to J. C. Stewart, three distinct clinical conditions may be classed under the title of nonsuppurative osteomyelitis.

(1) Cases of ordinary osteomyelitis in which, owing to nonvirulence of the invading germ or to unknown conditions increasing the resistance of the individual, no necrosis is caused. In such cases there is no pus, no sequestrum, but instead, in a certain number, marked irritative reaction is set up and there is a thickened, dense and painful enlargement. These cases are quite common, regularly recognized, and properly treated.

(2) Cases of injury, generally clinically fracture, where a small piece of bone is entirely separated and dies, forming about it a closed cavity of dense new bone in which it lies until absorbed, but without suppuration.

(3) This class, to which Stewart calls particular attention, differs entirely from the previous classes by having no notable beginning, but an insidious onset, although in two cases a febrile illness and a slight injury respectively antedated by two years the culmination of the disease by operation. The disease is essentially chronic, but progressive and regularly misdiagnosed and treated as rheumatism. Cases in this

*Read before the North Carolina Medical Society June 18, 1913.

type are not recognized by the textbooks, the nearest approach to them being called "chronic osteoperostitis," which is certainly a misnomer, for the periosteum is regularly normal.

Their characteristics pathologically are the transformation of the marrow cavity into a multicellular labyrinth filled with a tissue which microscopically resembles marrow. There is also a synchronous subperiosteal production of bone which results in a fusiform enlargement, the new bone being spongy and not dense.

They are characterized by insidious onset, so-called rheumatic pains, worse in damp weather and at night, with slight evening rise of temperature. While the two cases cited each give histories of an acute causative agent, in neither could this be said to stand in an undoubted etiologic position, as the local symptoms in both cases occurred over two years later. What could ultimately happen to a case of this kind without operation can only be surmised. Neither case showed any apparent change during the several months they were under observation, and it seems probable the bone would merely remain enlarged and painful until stirred up by a fresh injury or infection, when there would be suppuration and a sinus would be formed.

Diagnosis is easy after syphilis is excluded by the noneffect of the iodids. Tuberculous osteomyelitis regularly causes cold abscess and sinus formation, while periosteal sarcoma is generally more rapid and can be eliminated by skiagrams. A fusiform enlargement of a long bone, increasing very slowly, with point pressure tenderness at various places, and slight rise in the afternoon temperature, gives a characteristic picture. The treatment is opening the bone and following the morbid process each way until normal bone is reached, cleansing, drying, and filling the cavity with Moorhof wax for union by first intention.

Acute inflammation of the long bones with especial reference to excision of the diaphysis, is considered by R. G. LeConte, founded on a series of sixty cases.

Etiology.—Contusions, wounds, and foreign bodies, 38-63 per cent.

Infection.—*Staphylococcus aureus*, 12; unknown organisms, 4; unknown causes, 4; more than one cause, 8.

Age.—Before the fifth year, 8-13 per cent.; between the fifth and thirteenth years, 50-83 per cent.; after the thirteenth year, 2-3½ per cent.

Sex.—Male, 54 per cent.; female, 6-10 per cent.

Bones involved.—Tibia, 47-73.5 per cent.; fibula, 6-9.4 per cent.; humerus, 6-9.4 per cent.; femur, 3-4.7 per cent.; ulna, 1-1.6

per cent.; clavicle, 1-1.6 per cent.; more than one bone involved, 4 per cent.

The frequency in males, the time of life when the disease is most common, and the bones involved, all point to an injury as the predisposing cause. That in practically 75 per cent. of the cases the tibia was involved must be due to the large surface it presents covered by skin alone, and the frequency with which young males bump their shins.

Reviewing the cases as a whole, LeConte believes the following conclusions can be fairly drawn:

(1) The mortality and extent of the necrosis following acute inflammation of the bone depends not only upon prompt intervention, but also upon its thoroughness.

(2) Suppuration beneath the periosteum does not exclude an infection of the medulla, the presumption being that after three days this is also involved.

(3) Within seventy-two hours of the onset, osteoperiostitis is localized usually in the cortex; an incision, disinfection and drainage are sufficient to bring about a cure. If there is no marked diminution of the symptoms in twenty four hours after incision and drainage, the medullary cavity should be opened.

(4) When the cavity is opened and found healthy, the dangers from infecting it are slight.

(5) In the majority of these cases osteomyelitis was due to a neglected osteoperiostitis.

(6) In operations after the third day, where systemic symptoms are pronounced, the medullary cavity should always be opened and the opening be sufficiently long to expose healthy marrow, and sufficiently broad and long to expose healthy bone.

(7) The mortality of 10 per cent. was directly due to delay in operation, and to inefficient primary operation. In five cases the surgery was at fault, and had a radical operation been done, LeConte believes all would have recovered. In the sixth case, the delay was perhaps more responsible than the surgery for its fatal termination. It is but fair to say that in collecting these sixty cases, perhaps forty more were rejected for various reasons, none of whom died, so a mortality of 6 per cent. is nearer the truth.

Lastly, the surgery was bad, very bad in a number of cases, and the tendency to wait after giving drainage, to his mind, was not sound. He firmly believes that the attempt should be made in the acute stage to remove at the primary operation all diseased bone. We know the periosteum in the acute stage will reproduce all bony defects, and delay means a greater number of operations, greater destruction of bone, greater likelihood of epiphyseal inflammation, longer

convalescence, and perhaps higher mortality. Twenty years ago we were satisfied in appendicitis with opening and draining a large abscess. Today we say some one has blundered when we receive a case in the abscess stage. LeConte feels the necessity of resecting twelve shafts in sixty cases (20 per cent.) is an error of this same sort, for if efficient surgery had been done early, the condition would not have arisen for such an extensive operation. As Nichols has pointed out, the resection of a whole shaft is but little less shocking than an amputation, and the operation has a very definite danger from hemorrhage, and in a few cases, on account of the hemorrhage, it has had to be done in two stages. LeConte's plea, therefore, is for an early diagnosis and, to continue the simile of the appendix, to abolish the Ochsner treatment of delay and to treat acute inflammation of bones as we would a similar condition in the soft parts, *e.g.*, carbuncle, by radical excisions at the primary operation.

Under the head of acute infective osteomyelitis, I wish to refer to the acute diffuse and acute epiphysitis.

Acute diffuse osteomyelitis, a diffuse inflammation of bone and marrow, is due to infection with pyogenic organisms (staphylococcus pyogenes aureus and streptococcus pyogenes), or to mixed infection of the pyogenic organisms with the organisms of typhoid fever, of tubercle, etc. It may arise from a wound, such as a compound fracture, a gunshot injury, or an amputation. It may occur when the infection has been by way of the blood. The causative organisms may enter the circulation through the lymphatic system or may pass directly into the blood from a focus of suppuration in the skin, in the subcutaneous structures, or some deeper part. The organisms may have been taken into the system by the tonsil or respiratory organs (Kraske), the intestinal canal (Kocher), the genitourinary tract, or from excoriations, bruises, or small wounds in the skin (Warren). The exanthemata strongly predispose to osteomyelitis. Typhoid fever, typhus fever, smallpox, and malarial fever, lessen the vital resistance of marrow. Some observers teach that the typhoid bacillus is pyogenic (Frankel), but others think that the toxins of the typhoid organisms weaken the marrow and suppuration arises because of mixed infection with pyogenic bacteria (Park and Klemm). Keen insists that the typhoid bacillus has occasionally pyogenic power. In osteomyelitis from wound of the endosteum the medulla and cancellous tissue inflame and suppurate. The entire length and thickness of the shaft may be involved, and the periosteum becomes infiltrated, de-

tached, and retracted from the edges of the wound. The soft tissues around the bone also inflame and sometimes slough. More or less necrosis is inevitable.

The symptoms of acute diffuse osteomyelitis from wound are a very severe boring, gnawing, aching pain; great tenderness, deep swelling of the soft parts over the bone; the skin is healthy early in the case; a profuse offensive purulent discharge containing bone fragments and tissue sloughs is poured out; the periosteum is red, thick, and separated; a fungating foul mass protrudes from the medullary canal; rigors, sweats, and fever point to septicemia or pyemia.

Treatment.—In treating acute diffuse osteomyelitis expose the interior of the bone, curette the medullary cavity, swab it out with pure carbolic acid, and pack it with iodoform gauze; drain; apply antiseptic dressings; frequently cleanse; and use strong supporting treatment. When the sequestrum loosens, it should be removed. Some cases require amputation.

Acute Epiphysitis.—Acute osteomyelitis without a wound is called "acute infantile arthritis" or "acute epiphysitis." It affects the young, especially children from one to two years of age, but occasionally arises in older persons (ten to fourteen years). It begins at the epiphysal line. A strain may occur at this point, inflammation follows, and a hospitable welcome is extended to microorganisms which are contained in the body fluids and which pass through this area. In some cases chilling of the body is the predisposing cause. In some patients no history of injury is obtainable; a preceding illness, especially a specific fever, being responsible for the weakening of the tissue resistance. New tissues are always more susceptible to infection than old tissues, and one of the most susceptible to infection is the young bone at the end of the diaphysis. Septic organisms may lodge in this area, multiply there and produce systemic poisons. The femur and tibia are the bones most often attacked, the hip joint or knee joint being secondarily involved; the humerus, tibia, radius, ulna, and other bones may be attacked; the shoulder, ankle, or elbow joint may become secondarily involved. The youngest bone around the ossific centre first inflames, necrosis takes place, a small sequestrum forms, and the pus around the sequestrum is apt to make a cloaca and empty into the adjacent joint, lighting up a suppurative inflammation of the articulation, and into the medullary canal, causing diffuse osteomyelitis.

The symptoms of acute epiphysitis usually come on suddenly and especially at night, and the attack may be so acute as

to cause death by systemic poisoning before a diagnosis is arrived at. The disease is generally ushered in by a chill, which is followed by septic febrile temperature. The history will sometimes contain the statement that the patient was suddenly chilled after being overheated (sitting in a draft or in a cellar on a hot day, possibly by swimming when very warm, etc.). There is violent, burning, aching pain in the bone and great tenderness near the joint: the soft parts, which at first are healthy in appearance, after a time discolor, swell, and present distended veins; the neighboring joint swells and may become filled with pus; the periosteum and the shaft are involved for a considerable distance, each epiphysis may become affected, the shaft between being comparatively uninvolved, and the epiphysis may separate, displacement and shortening taking place. This disease is often mistaken for rheumatism because of the joint swelling, occasionally for typhoid fever because of the fever, and in some cases for erysipelas because of the redness of the skin. It gives a very grave prognosis. Sometimes an epiphysitis shows milder symptoms and is slower in progress (sub-acute). These cases are very often mistaken for rheumatism, but in rheumatism the joint is the part involved from the beginning, while in epiphysitis the joint is involved secondarily after obvious evidence of inflammation well clear of the articulation. Further, the symptoms of rheumatism can be rapidly improved by the use of the alkalies or the salicylates.

Treatment.—In treating acute epiphysitis do not wait for fluctuation, but incise at once. Break through the bone at one or more points with a gouge or chisel; curette; chisel away the diseased bone, and if necessary curette the medullary canal; irrigate with corrosive sublimate solution; swab out with pure carbolic acid; use iodoform plentifully; pack; drain the joint if it is involved; employ rest, anodynes, and strong supporting treatment; remove dead bone subsequently when it becomes loose; amputation may be required.

Chronic osteomyelitis is usually linked with osteitis. It may eventuate in osteosclerosis with filling up of the medullary canal, or in limited suppuration, or in caseation of the cancellous tissue (Brodie's abscess), or in necrosis. A tubercular inflammation is one form of chronic osteomyelitis. Syphilis, typhoid fever, etc., may cause it.

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Response to Address of Welcome.*

By Albert Anderson, M.D., Raleigh, N. C.

Mr. Chairman, Ladies and Gentlemen, and Fellow Members of the North Carolina Medical Society:

Meeting a personal friend after six years absence, who gives you a warm heart in a glad hand, makes a man feel good, and as both listen at mutual cordial greetings a good feeling grows into joy inexpressible. It has been just six years since we met at this place. We came prepared to enjoy our stay in this city, to which we have just been welcomed by a speech from your city attorney, which makes us feel at home already, and, sir, we wish to extend you and your good people our sincere appreciation of this hearty welcome. We know this is a city of no mean proportions, well known for its great hospitality, a citizenship of cultured men and women, a city which has more children in school than any other in North Carolina in proportion to population: six hundred in school to twenty-five hundred inhabitants. Where we find these conditions we know that hospitality, culture, education, arts and sciences, morality and religion, progress and wealth will be the possessions of such a people, hence we find here a light and water plant owned and operated by your city government—plenty of light by day and night—and light goes with deeds which are noble: plenty of water, both fresh and salt; an ice plant of twenty-five tons daily capacity, and that is not sufficient for the demands of your city; two banks which have the implicit confidence of your people, whose officers regard the deposits as a sacred trust; and shall we speak of your fish industry? It is the second largest shipping port on the Atlantic seaboard and the fish are like the character of the shippers—the very best—no second place in quality, and here you put more money in your fish fertilizer industry than all the other North Carolina counties combined. It ranks with similar plants on the great Chesapeake Bay. We have read of the great Inland Waterway during recent years until it has become in our minds the greatest possible project of the State for our industrial development. Your connection with this means much for your future prosperity. The four million dollars from the Government appropriated for this waterway and a railroad seeking a terminal at Cape Lookout, a few miles away, will no doubt make this a great commercial city. But don't lose your present Morehead charac-

*Read before the recent meeting of the North Carolina Medical Society at Morehead City.

teristics when your commercial greatness comes.

Look, now, ladies and gentlemen, at yonder magnificent boulevard, a street nearly a mile long and one hundred and twenty feet wide—that is an index of your leaders. When the righteous rule the people rejoice in prosperity. For twelve or fourteen years your chief officer, who led in your magnificent development, was that honorable Christian gentleman, Charles S. Wallace, who has been sent for several consecutive terms to the State Legislature, and as a mayor so a legislator—always the leader—modest as a woman but as courageous as a lion in the hour of duty. I am reliably informed that his successor, your present mayor, was made in the same mould. In North Carolina there has been under construction a central highway for the last year or two. This city is the eastern terminal, and in a short time you will find our people from the Capitol City and intervening points coming down in autos to spend the week-ends to enjoy your seashore. You have a city paper which worthily represents your people, for it is edited by Robert T. Wade, a brother of my friend Stacy, who is all wool and a yard wide.

What I have said of your city I did not know of my own knowledge, and I said to my informant, "Are you not stretching your blanket just a little too much?" He replied with great emphasis, "No, sir, there is only one garden spot in North Carolina, where grass grows green the year around, and that is Morehead City." This is the spot where I first saw the ocean, more than three and a half decades ago. As a country boy I came here on an excursion. When the Atlantic first burst upon my vision I was speechless in admiration of its grandeur and sublimity, as I watched its waves break upon the shore in its ineffable beauty of foam and spray. I then had my first and greatest conception of the power of Him whom the winds and the seas obey, who gave the seas His decree that the water should not pass His commandment. A Power able to rebuke the winds and raging seas into peace and quietness is no doubt the controlling influence in forming the great life of this people, a life measured in depth by high thoughts, in breadth by sympathies world-wide, in height by noble aspirations, and its length is measured not by years but by unselfish deeds.

According to Metchnikoff,

the large intestine is "simply an immense incubator for the cultivation of noxious bacteria." The absorption of the toxic products of such cultivation is responsible

for autotoxemia, and its protean manifestations. The regular administration of cholestin (or tablogestin) serves to increase, liquefy and hasten onward the biliary secretion, check intestinal putrefaction, promote normal peristalsis, assist intestinal digestion, and thus tend to prevent or relieve autointoxication. Samples, formula and literature from F. H. Strong Company, 58 Warren Street, New York City.

Antiferments in the Treatment of Cold Abscess.

Cocco reports the results of this treatment. The reason why cold abscesses are not absorbed like abscesses due to pyogenic infection is the absence of proteolytic ferments in the former. The pus of a cold abscess is made up mostly of broken down lymphocytes, whereas in pyogenic abscess the pus contains large quantities of polynuclear leucocytes which contain a proteolytic ferment. To hasten the absorption of a cold abscess it seems therefore rational to inject either a proteolytic ferment or some substance capable of inducing its formation. Hydrocele fluid into tuberculous abscess sufficed to bring about a cure within nine days. Another important feature of this mode of treatment is the avoidance of the ugly scars common after cold abscess.

For diagnostic purposes a few drops of the pus from a suspected abscess should be placed on solidified serum and after a few hours liquefaction with cavity formation takes place if the pus contains leucocytes, but the serum remains solid if it is tuberculosis pus. If the abscess has begun to be absorbed the proteolytic action is somewhat retarded. The presence of blood in small quantities does not interfere with the reaction.—*La Tribune Medicale*.

In face of the often reported discovery of a cure for cancer, Professor Geheimrath Czerny, of Heidelberg, created a sensation at a meeting of German scientists by asserting that all the stories of hope for sufferers from the disease were at the moment baseless. A specific cure for cancer has not yet been found, and perhaps never will be found, he said. He added that 50,000 die yearly in Germany of cancer, and 100,000 living Germans are suffering from cancer. He urged that the Government should do much more than at present to enable the various methods of treatment by Rontgen rays, etc., suggested in recent years, to be thoroughly examined. Loud applause greeted his suggestion that Germany and Great Britain should each build one Dreadnought less, and employ the £2,000,000 thereby saved in the establishment of 40 cancer institutes.—*Australasian Medical Gazette*.

Charlotte Medical Journal

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

SALINES SUBCUTANEOUSLY.

Magnesium sulphate is to a very slight degree absorbed by the stomach. Its cathartic effect depending largely on its power of abstracting from the surrounding tissues, thus obtaining an isotonic solution. (One decigram hypodermically in an adult has caused purgation. The injections should be made in the arm, and in a 2 or 3% solution. Results, though not uniform, did occur in a majority of cases. It is needless to state that the effect of magnesium sulphate hypodermically is produced in an entirely different manner than per os. The dose mentioned, under the skin, usually produces an effect in from five to seven hours. It has been suggested that these injections, if given in the abdominal walls, might cause purgation by reflex irritation. Toxicity, it has been claimed, might occur if injected directly into the blood. Aubert in 1857 maintained that intravenous injections of sodium sulphate produced a purgative effect. Claude Bernard recorded the same fact in the same year, and Headland in 1859. One of these writers gave experimental proof of the same. MacCallum experimented with intravenous injections of salines and found that those which caused purgation by the stomach or intestine have the same action intravenously or subcutaneously. Bancroft reported he found that barium chloride possessed the purgative property in the greatest degree, that the purgative effect is produced by increased secretion as well as increased peristalsis, and that the purgative effect can be counteracted or abolished by calcium chloride. Eckhardt's experiments were not favorable to the use of salines subcutaneously. Bancroft repeated MacCallum's experiments and came to the conclusion that sodium citrate and barium chloride subcutaneously and sodium sulphate intravenously act as purgatives, or subcutaneously. Barium chloride is frequently used by veterinarians subcutaneously as a purgative, one grain in this manner being sufficient to purge a horse weighing 1,000 pounds. It is, however, so poisonous as to be unsafe for general use. These investigations throw some light on this subject. Though intestinal peristalsis is undoubtedly increased by these salts yet the resulting purgation is not ob-

tained without attending dangers which destroy their practical importance.

COMMERCIALISM IN THE PRACTICE OF MEDICINE.

It is undoubtedly true that America has reached a state where commercialism is almost supreme in every walk of life. The school-boy will trade his marbles; the average teacher considers the salary paramount; the minister frequently receives a "call" where the pay is better; and far too frequently the doctor has become inclined to look after the dollar almost more than to the patient. Do not for one moment think that the finances are not justly to be considered, for they are. The doctor must live as well as anyone else, but is he not overdoing the matter in some respects, and in others is he doing himself justice? There are two phases of the subject, the one where the patient is over-charged and the other where he is under-charged. What is wanted in the business side of the profession is equity. It would be well and proper for a righteous charge to be made by the doctor, but far too frequently he does not follow that rule. As it stands with the great majority of physicians the doctor is placed in the unpleasant position of gouging the better class of patients to make up the deficit that the poor paying or non-paying patients have caused. Do not think that the non-paying patient is of necessity the poor man, for many a doctor can show you on his books where hundreds of dollars remain unpaid by men who are running automobiles and enjoying other comforts of life, while the physician plods along and waits patiently for the cash to come in.

The average doctor knows little or nothing about real business methods and procedures, and his books would send an expert bookkeeper to a sanitarium very quickly, and nine times out of ten, the doctor, when asked what the amount of a patient's bill is, will condescendingly smile upon the patient, pat him upon the shoulder and say, "That's all right. I must look it up. I have been so busy that I have not had the time to look over my accounts properly," etc., and the whole time he needs the money badly.

On the other hand, there are hundreds of doctors who charge enormous prices, as for instance, the writer knows of a case where eighty dollars was charged for setting a Colle's fracture (and the work not satisfactorily done at that). In many of the cities the minimum price of the visit of a competent doctor prohibits the poor man from calling in professional advice, and he depends upon the efficacy of the patent medi-

cines to his benefit or detriment as the case may be.

What the average doctor should do is to make an equitable price for his work—not to pauperize himself by making the rich man make him a gift of a tremendous sum for little service, nor to reduce himself to penury by allowing some people to go with unpaid bills. He should study bookkeeping and business methods so as to know just where he stands and be able to give in a few moments the sum total of the account to any inquiring patient. In this way, by being systematic, he could collect his bills better and would not be driven, as he so frequently is, to commercialism of the baser sort, for there is nothing that gets a bill paid more quickly than for a fairly honest person to know the actual amount of his or her account and realize that it is being kept close track of. Having his business in better shape, the physician would eliminate from his practice a lot of bad paying clients and would have more time for study and recreation. It is wonderful what system will do for the doctor.

Think it over, brother physician!

ESERINE.

Salicylate of eserine has been extensively experimented with by Craig, of Boston, and Vineberg, of Mt. Sinai Hospital. They found that when administered in milligram doses hypodermically every three hours it produced catharsis in 50 to 75% of cases. If the muscular coat of the intestine is distended with gas it fails to act on it as then it paralyzes the muscles. Its action on said muscles is much that of ergot on the uterus. It does not increase the flow of fluids into the intestine. Gynecological surgeons use it much to overcome the intestinal paralysis following abdominal operations. It is also used to overcome intestinal atony following parturition or to dispel gas from a distended intestine. It is sometimes administered immediately after an operation to ward off paresis. It is given in 0.02 or gr. $\frac{1}{3}$ doses. Packard discusses the subject thoroughly in a paper on intestinal atony. He got good results in a case of plumbers trap obstruction of the intestine to gases by administering 1-150 gr. eserine salicylate hypodermically. In two hours after the injection the patient usually expelled a large amount of fluid and gas, and the abdomen became soft and flaccid. Calabar bean has been given by veterinarians for colic in horses. Dr. J. C. Reeves, of Dayton, has given eserine hypodermically in doses of 1-12 gr. (0.005). Such large doses are unnecessary if not dangerous. Eserine can hardly be considered as a suitable or successful hypodermic purgative.

PODOPHYLLIN.

The resin of podophyllin, according to Brunton, acts on the bowels when injected subcutaneously as well as when introduced into the intestinal canal. Considerable inconvenience, however, is felt at the seat of the injection, occasionally resulting in necrosis. It may be taken as the best example of that group of vegetable cathartics, solutions of which when introduced under the skin produce increased peristalsis. Podophyllin introduced under the skin induces peristalsis in from twenty minutes to one hour. Podwissotsky found podophyllin-toxin in the root and resin of podophyllin and this was the active purgative principle. He also found another active principle picropodophyllin. One of these two resins is soluble in ether and alcohol and the other in alcohol alone. Prodophyllotoxin injected under the skin of a terrier produced seven liquid stools within three hours. Injected subcutaneously in a cat and the cat killed in a few hours the gut from near the stomach to the large intestines showed marked congestion. An alcoholic solution of this membrane and its contents showed the presence of podophyllotoxin. Braun in 1880 reported having used podophyllotoxin subcutaneously in children and that it represented podophyllin completely. In a child 13 years old he gave from 6-100 to 8-100 of a grain. Mackenzie and Dixon injected $\frac{1}{2}$ grain of podophyllin in a bull terrier. In 25 minutes the dog was restless and in 35 minutes had a normal stool followed by diarrhoea. In two hours eight fluid motions were passed. They injected 2-5 grain podophyllotoxin in a cat at noon. It vomited at two; had semi-fluid evacuations at 2:30; at three increased purgation, slime and bile; at 4 p. m. evacuations containing fluid blood and mucus. They found that podophyllotoxin and podophylliresin both exerted their specific action when injected hypodermically but in man caused so much irritation as to militate seriously against their use.

WORKING UP A PRACTICE.

What a pleasure it is to meet an old veteran practitioner of the old school; especially if he is inclined to be reminiscent, and such men usually are. They usually have a fund of good stories on hand, and know how to tell them in an entertaining way.

In conversation with one of this type of men, a short time ago, one who has enjoyed a very lucrative practice in a large city for nearly fifty years, and the most of the time from the same office, this question was asked of the veteran: Doctor what factor do you think counts most for the success or failure of a young physician when he makes

his maiden attempt to start a practice?

The doctor became thoughtful for a moment then, with a smile, replied that the answer to this query reminded him very much of a story that he heard long ago, but one that had impressed him as very pat. It goes thus:

A man had a pet parrot which had rather an extensive vocabulary. Through this fact he was very popular and enjoyed unusual liberties. One of his favorite diversions was to perch on the limb of a low tree in the yard of a neighbor who had two little fox-terrier dogs. These little fellows took great delight in barking at polly, and she, in turn, amused herself by one of her favorite expressions: "Sic em! eat em up, boys!" Terms that she evidently had learned from her sporty master. The little fellows would get pretty well stirred up, but of course the fun was mostly one sided, as far as polly was concerned.

After a time the dogs lost interest in the sport and went in search of other fun about the place. Polly became lonely, as is wont with her sex when there are no chances to torment someone, and dropped down to the ground to see what she could find by way of diversion there.

Hardly had she fairly landed in her new position when her former companions spied her and straightway made a concerted attack on her ladyship with most disastrous results. She finally bit, scratched, and flapped her way to freedom after a while, and flew up to her perch again much the worse for wear.

After she had orientated herself, and while she was straightening out her disarranged plumage, she was heard to remark, "Damit! I guess I talked too much."

Now the point of this little joke, said the doctor, is that this misfortune that came to polly, comes very often to young doctors who start out to establish a practice. When they go into a new neighborhood every old lady there and some younger ones, too, just apply the pump to him to find out how much more he knows than the other man. There are a lot of the younger men who easily "fall" to this lead, and if they are not very careful they will put a foot in so deep that they will wish that they had been born dumb.

The old doctors advice to young practitioners, and to old ones, too, for that matter, is to *"talk less and listen more."* Be like the old owl which figured in verse as follows:

"A very old owl lived in an oak,
The more he heard the less he spoke;
The less he spoke the more he heard;
Why aren't we all more like this bird."

INFANTILE PARALYSIS.

It is indeed strange how many very important matters escape the attention of the man who is always looking up in the air.

In all lines of endeavor many men seem to fail in their search for error, because they look too high, and too hard for the cause.

In a recent edition of the Sunday paper an article appeared which credits Dr. Simon Flexner, of the Institute of Research, with the discovery of the germ that is responsible for infantile paralysis. Doubtless this is so, and undoubtedly this gifted savant will eventually find another germ that will inhibit the activities of this one that he has found. We sincerely hope that he will and that very soon.

But just while we are on the subject, and for the sake of argument, a little discussion along the line of a retrospective analysis which, though it may not be strictly of a biological nature, may serve as a stimulating influence that may set some one thinking, who may like to reason along lines other than those that interest Dr. Flexner and his associates.

First off and to start things along, let us assume that infantile paralysis was little known ten or fifteen years ago. To be sure we encountered a case once in a while in general practice but these cases were not common.

Since then this malady has been steadily on the increase, and, in the general order of things, it would seem as though we should look for the cause of this increase among the many innovations that have become common in the handling of children. And again this cause must be from some procedure that is not just in accord with the laws of old mother nature, for her laws never change. They have been immutable for thousands of years, and she has reared healthy, and contented children in her old-fashioned way all this time.

Among the many novelties that have come into common use in late years is the so-called go-carts that we see all over the country, in fact they are used all over the known world on account of their compact nature, and the ease with which they are carried along on family trips, and because they are not expensive.

These conveyances for children differ very materially from the older styles of baby carriages in that they transport the child in an upright position for the most part. This position causes the spine of the little passenger to be in a doubled up position, which with the constant vibration from a dead axle, having no springs in many cases, brings on a condition of anæsthesia along the lower spinal area, which

cannot do otherwise than pass to a more serious condition, if the irritation is continued.

If one will but allow a person to wheel them a few blocks over a brick sidewalk or pavement, on a wheel-barrow, they will have a slight idea of how a child can suffer physically from constant transportation in one of these conveyances.

Go out on the street anywhere, at any time during a pleasant day, and one will see hundreds of these carriages of all kinds and shapes, but they nearly all have one common troublesome point, and that is a lack of springs, or means of absorbing the shock from the pavements or bricks over which they are wheeled.

Now whether there is a "Bug" concerned in the production of infantile paralysis or not, or whether he has been coralled or not, is not a part of this article. This matter can be safely left to the skill of Dr. Flexner and his associates. There are many old faithful practitioners of medicine however, throughout the country, who have successfully treated children's ailments all their long professional lives, and who use the common sense that God gave them in their methods of diagnosis, who have a regular "Organized Delusion" that these nefarious contraptions have a good deal to do with causing these spinal conditions that eventually lead to a form of infantile paralysis.

It would be interesting to note the effect of a law which would impose a strict inspection of all of these carriages used, and compel the use of shock absorbers, and incidentally a line of instruction of mothers, to the effect that they should not wheel their babies about in an upright position before they are two years old.

Editorial News Items.

Dr. A. Campbell, of Newton, has been elected county superintendent of health for Catawba county.

Dr. Clarence Judd, formerly of Cardenas, has just returned from a post-graduate course in New York and will practice in Raleigh.

Dr. I. E. Green, of Weldon, has been re-elected superintendent of health for Halifax county.

Dr. F. L. Shubert recently of Ashboro has located at Morehead City.

Dr. H. G. Utley, of Benson, has been elected county superintendent of health for Johnson county at a salary of \$2500. He will retire from practice and devote his entire time to the public health work.

Congressman Jno. H. Small has arranged with the U. S. Public Health Service to have an expert from the Washington, D. C., department visit eastern North Carolina, spending several months in specially malarious sections for the purpose of making a first-hand study with the most approved modern methods of scientific investigation. Municipal and county health officials in eastern counties desiring the presence of the expert will communicate with the Surgeon General at Washington, as it is proposed to have the expert spend most of the time in communities willing to afford all possible facilities for a scientific malarial investigation.

At Chester, S. C., July 10th a pellagrin was acquitted of the charge of murder on account of dementia attributed to pellagra. Medical men of both Chester and Columbia manifested much interest in the case, and a number were examined as experts on pellagrous insanity.

As a result of the development of small-pox in a recent admission to the State Hospital for the Insane at Morganton, Superintendent McCampbell has vaccinated each of the more than 1650 inmates of the institution.

The Governor's Council of State have just awarded the contract for the remodeling of the old Supreme Court building in Raleigh at a cost of \$40,000. The entire fourth floor will be turned over to the State Board of Health for its permanent headquarters. The Board expects to occupy the new apartments by the end of the coming winter.

At a recent meeting of Asheville physicians the following officers of the Meriwether Hospital were elected:

Dr. C. P. Ambler, Chief of Staff; Dr. E. B. Flenn, Assistant Chief of Staff; Dr. W. J. Hunnicutt, Secretary and Resident Physician.

A complete staff, including the various specialties, was also named and will be supplemented later. Ten Memorial beds were provided for and an addition enabling the institution to care for 75 patients was arranged for.

Dr. J. R. Anderson, formerly of Morganton, but recently residing at Cool Spring, Iredell county, has been elected physician to the Deaf and Dumb State Hospital at Morganton and will remove to Morganton.

The annual report of Clarence Barker Hospital, of Biltmore, shows patients treated

during the year, 243; receipts from pay patients, \$11,649.88. The authorities will double its capacity, adding an obstetric and a children's ward and several additional private rooms without delay.

Dr. John A. Ferrall, for the past three years Director in charge of the work of the Rockefeller Hookworm work in North Carolina, having been selected by Dr. Wickliffe Rose to assume the general management of the entire work of the Rockefeller Foundation hookworm field, has tendered his resignation as Assistant Secretary for Eradication of Hookworm to the State Board of Health and will remove his office to Washington, D. C., at an early date. Dr. C. L. Pridgeon, his first assistant, is called in from the field work and assumes the duties left vacant by Dr. Ferrall's resignation. Dr. Ferrall will continue actively interested in the hookworm work in North Carolina and will also continue discharging his duties as Secretary of the Medical Society of North Carolina.

After ten years service as Superintendent of Watts Hospital in Durham, Miss Mary Wyche has resigned to enter social service work. The trustees accepted the resignation and have elected Dr. C. D. Hill Superintendent, who will at once assume the duties of the position.

Dr. W. P. Beall, of Greensboro, has been elected President of the O. Henry Memorial Association. Dr. Beall was for many years an intimate friend and associate of the talented short story writer and accepts the position to aid in securing a proper memorial to one of the nations most talented authors.

Dr. A. A. Rucker has been elected County Superintendent of Health of Rutherford county.

At the recent session of the Directors of the South Carolina Hospital for the Insane the following officials were elected: Dr. J. W. Babcock, of Columbia, Superintendent, and Drs. J. L. Thompson, E. B. Saunders, and H. H. Griffin were re-elected respectively, first, second and third assistant physician. Dr. W. E. Fulmer, of Columbia, was elected fourth assistant physician, succeeding Dr. E. Y. Pope, of Columbia. Dr. R. G. Blackburn, of Columbia, succeeding Dr. Ernest Cooper, of Columbia, as pathologist.

Dr. Dan E. Seveir, of Asheville, has been elected County Superintendent of Health for Buncombe county at a salary of \$2,500 per

annum and will devote his entire time to the public health work.

The City of Asheville which has a water supply of marvellous purity and owns its watershed comprising some 8000 acres has taken steps to add 6000 acres of additional primitive forest to the watershed. This will afford the greater city an ideal water supply for at least the next fifty years.

Dr. W. S. Rankin, Secretary State Board of Health, has returned from a three weeks trip to the Canal Zone spent in studying the special measures taken for the prevention of malarial and other fevers, with a view to putting in practical operation, as far as may be, some of the methods in Eastern Carolina.

Dr. I. W. Royster, of Raleigh, sustained injuries serious in character by being knocked down by a passing automobile last week. It is believed he will recover.

Gov. Locke Craig has appointed the following official State delegates to the International Congress of School Hygiene to meet in Buffalo this month: Dr. L. B. McBrayer, Asheville, and Drs. W. M. Jones and T. J. T. Battle, Messrs. E. P. Wharton, T. P. Foust, J. A. Matheson, and Misses Etta Spier, Sue Nash, and Laura McAlister, all of Greensboro.

Dr. W. H. Brown, for three years Past Professor of Pathology in the University of North Carolina at Chapel Hill, has resigned to accept service with the Rockefeller Institute of Research Work in New York City. Dr. James A. Bullitt, late of the University of Mississippi, succeeds him.

Dr. J. W. Wilcox, of Carthage, has located at Laurel Hill.

The Fourth District Medical Society under the presidency of Dr. Wm. H. Smith, Goldsboro, Dr. M. M. Saliba, Wilson, Secretary, is publishing a monthly "Bulletin" devoted to the betterment of the profession in the district.

Dr. J. Howell Way, President State Board of Health, and wife celebrated their silver anniversary at Waynesville recently. A large number of friends called to present their respects, and appreciative tokens were sent by more than two hundred.

Medical College of South Carolina.

The Medical College of the State of South Carolina owes its origin to Dr. S. H. Dickson who, with Dr. Frost and Dr. Ramsey,

first discussed the need of such an institution. The first effort of these men to establish a medical college failed, but the following year, 1823, the legislature incorporated the Medical College of Charleston.

The success of the venture was so great that at the close of the session of 1828 1829 there were 139 students enrolled, and two years after the opening of the college the buildings were found to be no longer adequate for the accommodation of the students. The city council was requested to advance \$15,000 in consideration of the assumption by the society of medical attendance upon the charitable institutions of the city for 75 years. This offer was accepted and a lot adjoining the hospital was also given. With this money the present medical college was built and formally opened in 1827.

In 1881 an amendment of the charter was obtained authorizing the creation of a department of pharmacy with the right to confer the degree of graduate in pharmacy. This department after two years of operation was discontinued, but resumed in 1895 and from that time on has continued in successful operation.

At the last meeting of the general assembly, the old medical college of South Carolina passed into the hands of the State and is now controlled and operated as a State institution upon the same basis as other State colleges. It has been advanced to the grade B. and its faculty increased to thirty members with a large corps of lecturers, instructors, demonstrators, and assistants. The college now requires a four-year high school training preliminary to entrance, and in 1914 will advance to the requirement of one year of college work in chemistry, physics, biology, and modern languages.

The affiliation of the Charleston museum with the college affords the institution facilities possessed by no other Southern college for advanced development of the departments of anatomy and biology.

The maritime location of Charleston offers a field for the development of clinical teaching which is unequaled by any city between Baltimore and New Orleans, and with the hearty support of the State the Medical College of South Carolina will once more take a prominent place among the medical colleges of the country.

New Hospital at Spartanburg.

There has been such an outbreak of pellagra at Spartanburg, S. C., that the United States Public Health and Marine Hospital Service have decided to establish a receiving station at that place for treating pellagra patients. This dispensary which is

provided with all the necessary facilities for treating pellagra cases will be maintained for some time, and will be in charge of an experienced officer.

Dr. H. G. Eleazer.

Dr. H. G. Eleazer, a native of Lexington county, S. C., died suddenly at his home in Spring Hill on July 18th. He received his medical training at the Medical College of Charleston and graduated from that institution in 1885. The following year he finished at the hospital. Some time previous to his death Dr. Eleazer had a stroke of paralysis and it was the second stroke which caused his death. His work as a physician is well known and he was a surgeon for the Southern and C., N. & L. railways. His fifty-three years were years of service.

BOOK NOTICES.

Genitourinary Diagnosis and Therapy for Urologists and General Practitioners. By Dr. Ernest Portner, Specialist for Urology, Berlin, Germany. Translated and edited by Bransford Lewis, M.D., B.Sc., Professor Genitourinary Surgery, Medical Department of St. Louis University, St. Louis; Genitourinary Surgeon to St. John's Hospital and Frisco Hospital; Member of American Urological Association; American Association of Genitourinary Surgeons; American Medical Association, etc. Forty-three illustrations. St. Louis: C. V. Mosby Company. 1913.

The object of this book, which was to present in a concise form the practical therapeutic methods to the practitioner who intends to engage in the treatment of urinary diseases, is well attained. The author in a very practical way gives a wealth of practical valuable information, thus showing his powers of observation to be both discriminating and accurate, his deductions logical, and his therapy modern and to the point.

All physicians, and even the specialist himself, will find in its pages many useful hints and enlightening ideas. The price of the book is \$2.50.

Diseases of Women. A Clinical Guide to Their Diagnosis and Treatment. By George Ernest Herman, M.B., F.R.C.P. Lond., F.R.C.S. Eng., Consulting Obstetric Physician to the London Hospital; Consulting Physician Accoucheur to the Tower Hamlets Dispensary; late President of the Obstetrical Society of London and of the Hunterian Society; formerly Physician to the General Lying-in Hospital and to the Eastern District of the

Royal Maternity Charity, and Examiner in Midwifery to the Universities of London, Oxford, Cambridge, Durham, and the Victoria University, the Royal College of Physicians and the Royal College of Surgeons. Enlarged edition, revised by the author, assisted by R. Drummond Maxwell, M.D., Lond., F.R.C.S. Eng., Assistant Obstetric Physician to the London Hospital and Physician to Queen Charlotte's Lying-in Hospital. With 8 color plates and 292 figures in the text. New York: Funk & Wagnalls Company, 1913.

This book is written in such a way as to serve as a guide for the student and practitioner to the diagnosis and right treatment of the diseases peculiar to women.

In this fourth edition, the author had the assistance of Dr. Richard Drummond Maxwell in revising the book, but more especially in the parts relating to operative technique.

Many new illustrations, including eight color plates, have been introduced into the new edition, the format having been altered so as to afford a larger page. The book has been entirely re-set and the index divided into two—a general index and an index of authorities.

Applied Bacteriology for Nurses. By Charles F. Bolduan, M.D., Assistant to the General Medical Officer, Department of Health, City of New York. Philadelphia and London: W. B. Saunders Company, 1913.

In this little volume, emphasis has been laid on the immediate application of the subject of bacteriology to nursing, and only enough general bacteriology has been introduced to give the student a clear conception of the principles underlying the work. A study of all the ordinary modes of transmission of infection has been presented but many pathogenic bacteria have been omitted, as a discussion of them would have added little or nothing to the presentation of the principles already laid down.

This volume contains 166 pages of text and is well illustrated, which adds much to the value of the book. It is neatly and appropriately bound. The price is \$1.35.

Blood Pressure in General Practice. By Percival Nicholson, M.D., with seven illustrations. Philadelphia and London: J. B. Lippincott Co.

In issuing this volume it has been the aim of the author to furnish to the general practitioner and surgeon a short treatise on blood pressure entirely from the standpoint of its practical significance and value.

The book presents in as simple a manner as possible the material. It is not an ex-

haustive treatise on blood-pressure, but a simple exposition of the subject easily grasped and from a clinical standpoint.

To facilitate ready reference the diseases with changes in blood pressure have been arranged in alphabetical order, under the general headings of hypertension and hypotension. The book is one that we feel sure would help any physician and we take pleasure in recommending it.

The price is \$1.50.

A Reference Hand-Book of Gynecology for Nurses. By Catharine Macfarlane, M.D., Gynecologist to The Woman's Hospital of Philadelphia. Second edition, thoroughly revised. 32mo of 156 pages, with original line-drawings. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, \$1.25 net.

The principal changes in this edition pertain to details of technic—dry sterilization of gloves is described, and the iodine preparation of the skin; the sections on the preparation for and after-care of major gynecologic operations have been largely re-written, and numerous changes have been made throughout the book to conform with the present methods.

Additions to the text will be found under cancer of the uterus, vaginofixation, and acute gastric dilation. Three new illustrations have been added.

The book is beautifully bound in leather and being of a very convenient size presents a very attractive appearance indeed.

International Clinics. By leading members of the medical profession throughout the world; edited by Henry W. Catell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of John A. Witherpoon, M.D., Nashville, Tenn.; Sir Wm. Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume 11. Twenty-third Series, 1913. Philadelphia and London: J. B. Lippincott Company.

This is a quarterly of illustrated lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pædiatrics, obstetrics, gynaecology, orthopædics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners.

The articles in this volume are written by the most celebrated doctors in the country and are very interesting and valuable. Like others of this series, the book is well bound and indexed. The price is \$2.00.

Transactions of the Fifth International Sanitary Conference of the American Republics, held in Santiago De Chile Nov. 5 to 11, 1911. Published and distributed under the auspices of the Pan American Union, John Barrett, Director General, Washington, D. C.

This volume is very beautifully bound indeed, and contains much valuable information about the American Republics.

Abstracts of the Leading articles of the month.

Treatment of Paroxysmal Tachycardia.

—Esmein (Journal medical francais) after reviewing newly discovered facts concerning the nature and etiology of this affection, enumerates, after Vaquez, the following measures to be instituted for overcoming the paroxysms:

1. Lying on his back, the patient should execute very slow inspiratory movements, keeping the chest well filled with air during the intervals.
2. He should drink water or some other fluid, executing energetic swallowing movements.
3. Every ten minutes he should take a cachet containing 0.15 gramme (2½ grains) of pituitary gland substance.
4. Mild compression of the right pneumogastric nerve in the neck.
5. Tickling of the pharynx with a feather.
6. If the condition is not relieved in twenty-four hours, the patient should be given two dessertspoonfuls of syrup of ipecac at a ten minute interval.
7. If the tachycardia should happen to persist longer than three or four days, and signs of marked cardiac insufficiency appear an intramuscular injection of 0.5 milligramme (1-128 grain) of amorphous strophanthin should be given, on the next day, one milligramme (1-64 grain) by the same route, and on the third day, if necessary, an intravenous injection of one milligramme.

The efficacy of the first five measures mentioned depends in part upon the promptness with which they are employed, and also varies in different cases. The whole series should be tried, even if the first few do not prove successful.

Excision of the Larynx for Malignant Disease.—Nash (Australasian Medical Gazette) describes his operation on a man seventy years of age. With the head

stretched back over a pillow an incision was made over the hyoid bone to the sternal notch, and the tissues divided down to the deep cervical fascia. Many bleeding points required pressure forceps. The incision was deepened to the visceral layer of the cervical fascia. When doing this the space in the deep cervical fascia at the sternal notch was opened; some troublesome bleeding followed from veins and arteries in the space. The petrachal layer of fascia was not a very well-defined tissue at the midline of the neck; it lay close to the larynx and trachea, and the separating of it to right and left was only satisfactory when the sides of the larynx were exposed; then, with the handle of the knife and the fingers, the inner aspects of the carotid sheaths were reached, and sweeping the fingers up and down, the sides of the larynx and the trachea were well felt, and the region of the esophagus palpated. Division of the pretracheal fascia from the hyoid bone to the thyroid gland in the middle line was completed. The right lobe of the thyroid gland was enlarged. The isthmus of the thyroid was divided, ligatured outside the forceps, and held aside by the ligatures. At the level of the lower edge of the hyoid bone the tissues and skin to the pretracheal fascia were divided outward, on either side, with scissors. There were then two flaps, the deepest parts of either being the inner aspects of the carotid sheaths. When the flaps and the lobes of the thyroid gland were drawn aside the thyrohyoid membrane, the larynx, and the trachea were fully exposed, except for their posterior surfaces, as far down as the episternal notch, while the regions of the esophagus and pharynx were visible. The cricoid cartilage and adjacent rings of the trachea were next separated from the esophagus. This was the most troublesome step in the operation, owing to the mobility of the esophageal wall. The tubes were separated upward and downward.

Silk threads on a round needle were passed through the sides of the trachea, grasping a ring of cartilage. These threads were left long, and were grasped by pressure forceps. The trachea was now lifted forward, and divided below the lower margin of the cricoid cartilage obliquely from before upward and backward.

The lower segment of the air tube was drawn well forward with the threads. From this point the anesthetic was administered on a towel through the severed trachea. The larynx was lifted forward by forceps, and by blunt dissection was separated from the esophagus up to the region of the inferior constrictor muscle; this was raised off the cricoid cartilage and pressed aside. The

larynx was again drawn forward, and the anterior wall of the pharynx was pushed backward till the apices of the superior cornua of the thyroid cartilage were reached. An opening was made outside the apex of each great cornua into the pharynx. Pressure forceps were then placed on the pharyngeal wall, and with the scissors a cut was made from right to left, one blade being on the outside of the thyrohyoid membrane, and the other in the pharynx between the tongue and the epiglottis. On completing this incision the larynx and epiglottis were freed. A considerable gap was left in the anterior and lateral walls of the pharynx.

The pharyngeal wall was sewn to the tissues just below the hyoid bone, the mucous membrane being inverted at all points. A thumb needle armed with catgut was suited to the necessities of the situation. The esophagus had not been opened along its course. There was no difficulty with bleeding in the immediate esophageal or tracheal planes. Before the trachea was severed the patient was placed in the Trendelenburg position. With a round needle the capsule of the thyroid gland was picked up, and the sides of the isthmus approximated with two catgut stitches beyond the trachea. This helped to push forward the trachea, and formed a soft cushion for it to rest upon. The tracheal opening was attached to the skin margins by silk sutures, a short distance above the episternal notch. The muscular and fascial layers were sewn together with catgut along the whole extent of the wound. A small piece of iodoform gauze was placed in situ near the hyoid bone. The skin incisions were closed with continuous sutures of iodized silk.

One Thousand Cases of Syphilis Treated with Salvarsan.

Kilroy, in *The London Medical Lancet*, states that 2147 injections were given to 1000 cases—the first injection on August 16, 1911, and the last on November 8, 1912. No deaths have occurred. Seventeen cases received only one injection; 865 cases received two injections; 75, three injections; 40, four injections; and 3, five injections. There were three cases of pain, stiffness, and swelling of the arm, causing some loss of service, but no permanent damage. In one of the cases quite recently he felt confident that he injected 250 Cc. of the solution into the space between the vein and its sheath. The reactions were on the whole very mild—twice a temperature of 104.8°. The great majority showed no rise of temperature. A few reactions were delayed to the next day. No reactions occurred on the day of injection. Herxheimer reactions were not very common, and it was difficult to separate

them from arsenic rashes. He could not satisfy himself that they were more common in one particular type of case than in another, except that possibly florid early secondary cases provide them in greatest numbers. Very fibrous non-vascular tissues are resistant. Florid secondary syphilis gives the most dramatic results. There were three cases of pain, stiffness, and swelling of the arm, causing more loss of service, but no permanent damage.

Occasionally resistant ulcerations (particularly those of the pharynx) are met which improve up to a certain point, and then cease to improve, only to yield to vaccine. At times, even though the polymorphous rash of the syphilitic disease disappeared promptly there persisted patches of eczema or infections of other types, which later cleared up under vaccine.

The needle used was of tantalum fixed in a modified McDonagh's holder, this being harder than steel or platino-iridium, not rusting, nor expensive. As to pace it is stated that one operator can deal with 12 cases an hour provided he has very skilled assistants. He has equaled 21 injections in 1½ hours. About 50 per cent. of the cases examined after having had salvarsan gave a negative Wassermann.

Of the 2147 injections given to 1000 cases with 13 invalidings, there were no deaths, and 22 clinical relapses readmitted to Kilroy's hospital, two clinical relapses admitted to other naval hospitals, and two occurring in ships. Of 901 cases receiving two injections, 21 cases reached the hospital as relapses, two were known to have recurred in ships, and two have been treated in other naval hospitals.

Of 68 cases receiving three injections, one case reached the hospital as a clinical relapse.

In 14 cases receiving four injections, no case reached the hospital as a clinical relapse.

The Pineal Body. Kidd (Review of Neurology and Psychiatry) gives a very exhaustive and interesting review on what is known of the pineal body. The first interesting fact which he discusses is the development of the organ. This development appears to be in some cases due to two evaginations from the roof of the diencephalon. The extraordinary thing is that in some cases these protuberances from the roof are in the median line, whereas in other cases they are bilateral. It is held by some that only one of the protuberances develop into the pineal gland, whereas others believe that it is usually the result of the fusion of both. Those who hold that it is due to only one of these outgrowths, think that it

is the other outgrowth which develops into the so-called pineal eye. The organ appears to be present in practically all animals. So far as is at present known, no epiphysis has yet been discovered either in the adult or during the ontogeny of the *Crocodylia*.

As regards the histology of the organ, an enormous amount of work appears to have been done in connection with it. In many of the lower animals there is a definite tubular form either simple or budding. In these cases the tube is lined with epithelium projecting into the lumen. In most cases this early tubular condition has been lost, and the gland has become a more or less homogeneous mass. The structure of this mass has been keenly debated, particularly in regard to the question as to whether it contains nerve fibres, nerve cells, and muscle fibres. It would appear to be fairly evident now that no muscle fibres are contained therein, but there are still those who believe that they can demonstrate the presence of nerve fibres and nerve cells, though the nerve fibres, if present at all, seem to be very close to the connection of the gland with the roof of the third ventricle. Apart from these elements there appears to be a unanimity of opinion that the great bulk of the gland consists of special pineal cells embedded in a mass of neuroglia, the fibres of which are connected with a few neuroglial cells. The special pineal cells appear to contain very little protoplasm, but a large nucleus and nucleolus. The following description of the condition in birds, etc., gives a general idea of the histology of the organ; The pineal of birds differs from that of mammals, and has a characteristic aspect. In gallus glandular and neuroglial elements are found: the nuclei of the glandular cells are rich in fuchsinophile granules. The organ is divided by the connective tissue septa into a large number of multilocular cavities, often irregular, in the central part of which is often seen a clear lacunar space, more or less large, in relation to which the glandular cells frequently take a radial disposition. In the interior of this space one sees numerous transparent spherules, whose limiting membrane alone stands out prominently. Sometimes, between the spherules there are irregular granular masses; at other times groups of elements exactly like granular elements. The cell body of these granular elements has a spongy structure. The neuroglial elements appear specially evident about the capsule, and sometimes along the septa. In the pineal of the guinea pig and rabbit most of the cells are polygonal, and have a spongy protoplasm; other cells, which present similar characteristics, are distinguish-

ed by their swollen appearance, and a clear space, full of liquid, is formed in the cell-body. One often sees spheres of various sizes, either isolated or grouped. In very young rabbits, the pineal cells have abundant protoplasm, with a nucleus rich in fuchsinophile granules; in adult rabbits, these cells are rather scarce, the fuchsinophile granules are heaped up irregularly, and the nucleus is sometimes wanting. In adults the granules appear to undergo regressive changes; the protoplasm seems to be arranged in irregular granules, but little distinct; also, the gland preserves its epithelial aspect in some parts only. One of the most interesting parts of the review is the clinical-pathological. In this part he produces evidence to show that the pineal gland appears to exert a restraining influence on the development of the whole of the sexual characteristics. The pituitary, on the other hand, would seem to have a stimulating effect in the development of these strutures. When the pineal has been destroyed by the presence of tumors, it would seem that the over-action of the pituitary has led to great increase in the rapidity of the development of these special characteristics. Marburg considers that three pineal conditions can be recognized: (1) Hypopinealismus, giving premature development, genital, sexual, and somatic; (2) hyperpinealismus, producing adiposity; (3) apinealismus, producing cachexia. The following is one of the typical cases he quotes: A boy of four years of age developed normally for first year. Then had convulsive attacks. When he was three, the formerly bright boy showed a strikingly quiet and shy disposition; he sat in a corner and cried. At this time he began to grow quickly and vigorously; his bodily growth was excessive. His penis developed enormously; this was attributed to masturbation, but there was no proof of this. When four, the boy looked seven or eight, was very bony and muscular and had plenty of fat; his skin was of natural color; height, 6¼ inches too tall for his age; weight, 7 lbs. too much; mammary glands hypertrophic, contained colostrum. The flaccid penis measured 9 cm; testes as large as a pigeon's egg; abundance of dark pubic hair; extremities normal. Mentally, he was precocious. Definite intracranial symptoms were present only during the last four weeks of life. Post mortem a psammoma-sarcoma of the pineal was found.

Serum Therapy of Melena Neonatorum.

—Franz (Munch. med. Woch.) gives his experience in the treatment of hemorrhages in melena neonatorum. At the Frauenklinik at Graz from 1900 to 1911 there were treated 35 cases of gastrointestinal hemor-

rhage in newborn children. The mortality was 50.9 per cent. Injections of gelatin have heretofore been the best method of treatment, but even with the use of these there was a mortality of 62 per cent. The hemorrhage occurred in portions of the gastrointestinal tract entirely without lesions, therefore there must be some failure of the blood to coagulate in these cases. The new methods of serum therapy seem about to give better results than we have heretofore had. Experiments in vitro and in animals have shown that the admixture of serum increases the coagulability of blood. The author has treated 5 cases of melena neonatorum by injection of blood derived from the naval. All the cases were cured, and in 4 of them the action was very rapid. For the purpose of obtaining the serum the cord of a healthy woman, after ligation of the end next the child, was allowed to bleed into a vessel under aseptic precautions, and this serum was used for the injections. The injections were made, after disinfection of the skin by iodine, into the upper part of the thigh and buttocks, either subcutaneously or intramuscularly. The serum was from one to four months old when used. The dose was 10 to 25 c.c., repeated when necessary. He says that he has shown the harmlessness of these injections and their therapeutic efficiency.

Postconceptional and Hereditary Syphilis.

Bobrie (*Étude sur la Syphilis*,) gives the following conclusions from his study of postconceptional syphilis and heredity of syphilis. In the absence of all treatment we may find placentas that are macroscopically healthy along with children evidently syphilitic. Nevertheless, maternal treatment has a marked effect on placental hypertrophy. The gravity of the syphilis of the fetus bears no relation to the hypertrophy of the placenta. Hydramnios is exceptional. At whatever time of pregnancy the maternal chancre is contracted the fetus is still infected. The degree of infection varies with the time of infection; the maximum gravity, causing macerated fetus, is at the third month; the gravity then decreases. The fetus never receives a true immunity; while there may be no evidence of syphilis the disease is still present in a latent form. Postconceptional syphilis is more serious for the existing pregnancy than for a later one. The fetus is always infected long before the roseola appears; infection occurs as soon as the mother has been attacked by the chancre. The most effective treatment is mercury in the form of soluble salts or pills; gray oil and salvarsan have not so good an effect by far. Hereditary syphilis can only be

transmitted to the fetus by way of the placenta; the spermatozoon which contains a treponema cannot fecundate an ovum. Exceptions to Colles' law are not true. Mothers who do not show syphilitic lesions are still infected, the syphilis being latent. Heredodystrophy is a consequence of syphilis, but not syphilis itself; such infants can become infected by syphilis, and it is then transmissible by the germinative cell only.

Gravidic Hypertension. Wallich (*Ann. de Gyn. et D'Obst.*) says that hypertension is a syndrome should be carefully studied in pregnancy. It seems to be related to a functional disturbance of the kidneys and autointoxication. This hypertension is signalized by headache, insomnia, edema and polyuria, and may be responsible for placental or visceral hemorrhage. The pulse tension of the pregnant woman should be carefully watched, with the sphygmometer. When recognized, hypertension should be treated by rest in bed, diet, laxatives, and medicines which reduce hypertension. In acute cases we should resort to venesection with abundant and repeated bleedings. We should be prepared to foresee and prevent eclampsia, and these attacks of hypertension, which may kill either mother or child. High arterial tension may be regarded as the usual cause of placental hemorrhages, and of the visceral hemorrhages which occur in eclampsia and albuminuria. Nitrogen ingestion must be regulated and meats reduced to once a day.

Indications for Heliotherapy in Tuberculous Peritonitis.

D'olsnitz (*Ann. de Med. et Chir. Inf.*) gives the histories of 3 cases of tuberculous peritonitis treated by him successfully by heliotherapy, and one that was not successful. Many observers have reported this same rapid curative action of the sun in tuberculous peritonitis, especially in the ascitic form, when treated early in the disease. Each of these 3 cases would have been considered at first as having a bad prognosis. The good effects of the treatment were shown by the complete disappearance of the clinical signs of tuberculosis in the peritoneum after from one to three months. The good effect of heliotherapy has been seen in large tracheo-bronchial adenopathies as well. Many long sittings of treatment may be given. The caseo-ulcerous forms of tuberculosis with generalized lesions and rise of temperature are very favorably affected by heliotherapy, especially when combined with sea baths. Ascitic cases become encysted. This treatment may be used without fear in advanced cases and apparently very grave ones.

Treatment of Tuberculosis in Children on the Shores of the Mediterranean by Sea Baths and Sunlight.—Rebillet (*Ann. de Med. et Chir. Inf.*) describes the treatment given to tuberculous children at Cannes, and other sanatoria on the Mediterranean Sea, as carried out in some cases throughout the winter. Before and after the sea bath most of the day is used for sun treatment, the parts being exposed to the unchanged rays of the sun for from one-half to three hours daily. The head is protected with a large straw hat. Under the influence of the red and infra red rays there is a reparative action and a phagocytosis which is indirectly microbicidal. In white osteitis, necrosis, lupus and tuberculous ulcerations there are slight redness and swelling and increased suppuration. The skin becomes deeply pigmented, which the author considers a favorable prognostic sign. At once appetite returns and digestion is re-established and there is a rapid improvement in general health. Adenotracheobronchitis at once improves if superficial; the glands separate and decrease in size. After incision of suppurated glands they heal kindly. He gives histories of 32 cases. He says that sea baths can be given all winter if commenced in October. Heliotherapy without instruments is effective in glandular and osseous disease. It produces cicatrices remarkable for their solidity, suppleness and whiteness. The skin looks normal. Immobilization should be used only when the joints are painful and inflamed. As soon as the articulation becomes painless and indolent the limb should be mobilized and exposed to the sun. As few operations as possible are done. Orthopedic treatment consists of progressive mobilization of the articulations, and massage of atrophied and paretic muscles.

Results of Excision of Hip Joint in 34 Cases of Suppurating Tuberculous Disease.—Morton (*British Medical Journal*) operated by the anterior route, making his incision below the anterior superior spine and between the sartorius and the tensor fasciæ femoris and then between the rectus and the gluteus minimus. The head of the bone was excised along with all the diseased tissue, and, although the wounds were drained, healing took place in most of the cases within two months, this being to the author's mind the great advantage of excision over treatment of the abscess alone. These cases were seen years after the operation and the results were noted. In nearly all cases flexion was present to a right angle, but lateral movement in abduction was quite limited in some cases, was fair in others, and in one was nearly perfect.

Shortening increases steadily after the operation up to two inches or more, and in one case was four inches, the stump of the neck riding up on the ilium. The joints are very unstable and the limp is usually quite marked, even with the use of an extra sole. The patients were able to walk a considerable distance and in the more favorable cases even many miles. Deformity recurred in one case without recurrence of the disease eight years after operation and was removed by weight extension. He says that the range of motion, at least, is better after excision than it would be after conservative treatment of the abscess alone.

Treatment of Seborrhea Sicca.—Sabatie, in *Progres medical*, says that in the treatment of dry scaly seborrhea of the face mild measures should alone be employed, as unduly energetic methods may bring on eczema. Washing with hot water alone, without soap, is sometimes sufficient to overcome the condition; where this is not the case a teaspoonful of salt or sodium bicarbonate may be added to the wash water. If this fails the following solution should be applied locally every evening, with a pledget of cotton:

R Acidi salicylici.....gr. xv (1 grm);
Alcoholis (65) per ct. 3ii (10 grms);
Aque.....3iiss (100 grms).
M. ft. lotio.

After using this preparation the skin should be dried and the following ointment applied:

R Zinci oxidi.....3i (4 grms);
Petrolati..... }
Adipis lanæ hydrosi } aa 3 iiss (10 grms).
Aque rosæ..... }
M. ft. unguentum.

Where the condition persists in spite of these preparations more active treatment is justifiable. If the skin is dry ointments containing tar, oil of cade, or oil of birch may be used:

R Olei betulæ.....℥ xv (1 grm);
Rosorcinolis.....gr. iv (0.25 grm);
Zinci oxidi.....3i (4 grms);
Adipis lanæ hydrosi.....3ii (8 grms);
Petrolati.....3iii (12 grms).
M. ft. unguentum.

If the skin is red and the scales greasy and moist a weak potassium sulphide lotion—ten drops in a glassful of water—or one containing the following powder, may be used:

R Sulphuris præcipitati.....gr. xv
Talcì pulveris.....3iiss
Misce.

Trouble of this latter type constitutes a connecting link between seborrhea and eczema. The treatment customary in eczema may thus become indicated.

Nervous Symptoms After Salvarsan.—

Ravaut (Ann. de derm. et syph.) cites a case in which the patient, a man aged 31, contracted a chancre in January, 1911, for which he received nine mercurial injections and a course of mercury by the mouth. In July of the same year there were hypertrophic, oral, and palatal plaques, but no symptoms drawing attention to the nervous system. The Wassermann reaction was positive. Four intravenous injections of salvarsan—0.3, 0.4, 0.5, 0.6 gram at intervals of a few days—were given in the latter part of July and beginning of August, and in September fifteen intravenous injections of cyanide of mercury—0.01 gram—were administered. The mucous plaques healed after the first salvarsan injection, and none of these had any more serious sequel than persistent headache, of which the patient was still complaining in January, 1912, and for which mercury and iodide were freely prescribed. In May the patient again presented himself for further treatment of the same symptoms, which has continued in spite of all measures. In November he returned, complaining of very sharp pain in his left flank with nocturnal exacerbations. The physical examination pointed to a diagnosis of intercostal neuritis in the last dorsal nerve roots. The history of the case then suggested the possibility of a specific etiology—possibly meningial—and lumbar puncture was proposed and accepted. The cerebro spinal fluid was under considerable pressure, and contained a large excess of lymphocytes, some polynuclears, and a few cells resembling plasma cells. There was a good deal of albumen, and the Wassermann reaction of the cerebro spinal fluid was positive. The withdrawal of the fluid had a marked therapeutic effect, for his pain subsided, and the headaches markedly diminished. Enesol was then injected intravenously every day (3 c.c.m.), and under its influence there was still further amelioration of symptoms. In January, 1913, the patient's symptoms had completely subsided; the Wassermann reaction of the blood was negative, but that of the cerebro spinal fluid still positive. The patient wrote that at the end of that month the pain had returned, with weakness of the right leg, and a patch of anesthesia on the outer side of the left thigh. The chronic syphilitic meningitis had recurred, as is its wont, in spite of the most energetic and radical treatment. The author emphasizes the importance of an examination of the cerebro spinal fluid in all cases of syphilitic neural manifestations, especially where there is any chance of the presence of a latent meningial endarteritis syphilitica. He goes so far as to say that it is dangerous to base one's anti-

syphilitic treatment on the result of the Wassermann reaction of the blood alone, for it is always possible, as in this case, that active cerebro-spinal syphilis may be progressing, with a negative reaction to Wassermann's test in the peripheral circulation.—Brit. Med. Jour.

A Case in which Round Worms Caused Symptoms Leading to a Diagnosis of Appendicitis.

Kelly, in The Australasian Medical Gazette, mentions this case:

Joe F., æt. 5 years, was admitted to hospital on April 12th, 1913. His mother gave the following history:

Five months ago he complained of severe pain in his belly, and was admitted to St. Thomas' Hospital, London, where a diagnosis of appendicitis was made, and an operation advised. The family having taken passages to Australia, did not wish an operation, and the boy, recovering, was, after a stay of a few weeks in hospital, brought out here.

He has complained of slight attacks off and on since, but none were of the severity of the present attack. His temperature on admission was 100°, and pulse 106. He looked pale and ill, and was complaining of the pain in his belly. His tongue was coated, but moist, and he had vomited once. His bowels had been constipated for some time. Heart and lungs sound, urine normal. There was rigidity of the right rectus muscle, and he was very tender on pressure in the appendix area. An operation for the removal of his appendix was decided on.

Operation.—On opening the abdomen, the appendix was easily found. It was slightly reddened, but there were no evidences of previous trouble. The appendix was removed. As the condition of the appendix could not possibly account for the acute symptoms, further examination was made, and a coil of small intestine was found to have a peculiar whip-like feel about it. This was pulled out, and was seen to be intensely congested and inflamed, and with some flakes of lymph on it. Three or four round worms could be felt, and also seen to move in it. They occupied about eight inches of the bowel, and were lying lengthwise and all together. It did not seem wise to open the bowel and remove them, nor yet to crush them, as one could not say what symptoms might follow the crushing. Had the worms been near the cæcum it would have been an easy matter to push them along and remove them at the appendix stump, but they were at least three feet away. The bowel was replaced, and the abdomen closed. Three days later, whilst still on a liquid diet, the patient was given 1 gr. of santonin and 6 gr. pulv.

seam. co. followed in six hours by castor oil, and two round worms, each about ten inches long, were passed. Two days after this, santonin was again given, and two more worms were passed. Santonin was administered again on the sixth day, but there was no result.

The boy is now gaining in weight, and is quite rosy, and his mother says he has never looked so well in the last eighteen months.

I have seen cases where the appendix, on removal, has been found full of thread worms, but I never before had the experience of feeling and seeing round worms in the small intestine.

Treatment of Pulmonary Emphysema.

—Jong, in *Journal de medecine de Paris*, states that where emphysema is accompanied by asthma and chronic bronchitis, the treatment of the asthmatic paroxysms should be the same as in ordinary cases of this affection, viz., injections of morphine, inhalation, ethyl iodide, or of fumes or powders containing stramonium. Inhalation of the following solution, sprayed into the nose, is often of advantage:

R Atropinæ sulphatis,	gr. ii (0.15 grm);
Sodii nitritis,	gr. ix (0.6 grm);
Glycerini,	ʒ ss (2 grm);
Aquæ destillatæ, q. s. ad,	ʒ ss (15 grm).
Fiat solutio.	

Some degree of caution must be enjoined, however, in the use of strong alkaloids, especially when cardiorenal weakness begins to appear. The use of a spray containing eucalyptol in solution of glycerin might be tried instead.

In the intervals between asthmatic paroxysms these patients often complain of dyspnea due to insufficient expectoration. In this event kermes mineral, with or without tincture of lobelia, may be given. Potassium iodide is sometimes very effectual, more especially in the obese, but in other instances induces excessively copious expectoration as well as gastrointestinal disturbances. Some patients who do not tolerate the iodide do well on oily preparations containing iodine or on the so-called organic compounds of iodine.

Again, some patients are distressed by an excessive flow of secretions, particularly at the close of periods of dyspnea. Here terpin hydrate, with or without codeine, is of service. Hirtz advises the administration of ergot. Sometimes the temporary use of a mineral water containing sulphur proves beneficial.

Where there is emphysema in cases with arrested tuberculosis, the chronic bronchitis should alone be treated, sulphur and iodine being used with caution, however, except

in cases where the tuberculous trouble has long preceded, when iodide medication seems clearly useful. Arsenic and strychnine are advised by Robin and Hirtz.

When infectious diseases complicate emphysema, digitalis, camphorated oil, sparteine, Dover's powder, wet cups, wet cloths applied to the chest, and subcutaneous injections of oxygen are useful measures. When arteriosclerosis and chronic nephritis finally supervene in emphysema, and the dyspnea is no longer relieved by stramonium, iodides, etc., rest in bed, mild saline purges, milk or salt free diet, theobromine, small doses of digitalis intermittently, and caffeine, should be prescribed.

Surgical Treatment of Tropical Dysentery.

—Muller (*Munch. med. Wochen.*) reports four cases of appendicostomy for dysentery, two of amebic and two of bacterial character, in all of which marked improvement or a cure resulted. He regards appendicostomy as less dangerous and more reliable even than high irrigation in cases of ulceration of the bowel. He prefers a tranverse to a lateral incision along the sheath of the rectus. For the success of the operation it is necessary that the appendix should be sufficiently long and movable, though adhesions may be separated and the mesenterium detached to enable the appendix to be sutured in position without undue traction. It is important, however, to avoid separating the entire mesentery, as this might lead to gangrene of the stump. He also advises that before suturing the appendix to the abdominal wound a catheter should be inserted and a test irrigation made. If this be omitted the surgeon may be in the unpleasant predicament of overlooking an occlusion of the appendical lumen. If a stricture should be found or the presence of other severe destructive changes be detected, it is better to dispense with appendicostomy and replace it by cecostomy. The latter has the great advantage that through the formation of an artificial anus the entire colon is placed at rest. On the other hand, it has the same objectionable features belonging to any artificial anus. If cecostomy, however, should be deemed preferable in any particular case, it is advantageous to remove the appendix, as in most instances it is the site of ulcerations and contains pure cultures of the ameba, which, if left behind, may lead to reinfections.

Treatment of Chorea.—Comby, (*Bulletins et memoires de la Societe medicale des hopitaux de Paris*), points out that by giving arsenic in large doses for a short period only, therapeutic results are obtained with much less danger of toxic phenomena

than when small doses are given for weeks and months. The Dr. suggest the following measures for chorea:

1. Rest in bed for two weeks, with relative isolation; no playing with other children or mental work.

2. Milk diet, consisting of 200 grammes (six ounces) of milk every two hours. This facilitates the taking of the arsenic. Vegetable foods should be added after the ninth day.

3. Arsenic in the form of Boudin's solution (one to 1,000 arsenic trioxide in water) given in a flavored gummy mixture, of which one tablespoonful is given every two hours, with the milk. Each day a new mixture is made, the successive preparations containing, respectively, 5, 15, 15, 20, 25, 20, 15, 10, and 5 grammes of the Boudin solution in admixture with 120 grammes of the gummy menstruum. The entire arsenical treatment thus takes only nine days. In children, five to seven years old, the amounts of Boudin's solution employed are reduced from the scale mentioned, ranging from three to fifteen grammes, while in those under five years the amounts are from two to ten grammes.

If vomiting should appear, the arsenic is left off for one half to one day. If it still recurs after this, arsenical treatment should be abandoned. In this way all possibility of serious toxic effects is eliminated. Among over 300 cases treated with arsenic in the last thirty years, but one case of arsenical polyneuritis—with subsequent recovery—occurred; in this patient, a little girl, seven years old, treated nearly twenty years ago, the dose of Boudin's solution had been carried up to thirty five grammes a day. As a rule, the remedy is well borne and the effects are promptly manifested. The choreic movements stop in a week, and in two weeks the chorea is cured. Among 175 children treated since 1900, 135 were given the arsenic, the remaining forty being milder cases. The average stay in the hospital of the arsenic treated cases was twenty-eight days.

Albuminuria and very hot weather contraindicate the arsenical treatment. In hot weather the copious perspiration and diminished urinary flow decrease the tolerance for arsenic, as well for antipyrin or any other active drug. In such periods hydrotherapy, especially the cold pack, should be relied on to subdue the nervous excitation.

Intramuscular Injections of Mercury (Emulsion) in the Treatment of Syphilis of the Nervous System.—Cazenavette (New Orleans Medical and Surgical Journal) states emphatically that mercury has

been, and is still, our best weapon against the ravages of the spirochete, and of value in all stages of syphilis. While admitting that remarkable results have been obtained by a single dose of salvarsan, it is not only necessary to repeat the injection of salvarsan two or three times at intervals of a few weeks, but to follow this by mercurial treatment, in order that the spirochete may be destroyed and the disease cured. The advent of salvarsan, according to the writer, has helped to strengthen the belief in the therapeutic possibilities of mercury. In the treatment of syphilis of the nervous system rapid mercurialization is necessary to arrest promptly the ravages of the disease. His favorite method is the intramuscular injection method, as this has several advantages. The treatment is entirely in the hands of the physician; the amount of mercury administered is small. Salivation is infrequent and the amount absorbed into the system is definite. Finally, there is no disturbance of the alimentary canal. The Dr. favors the use of the biniodide in oily solution.

Miscellaneous.

Thyreogenic Bone Tumors.

Cases of tumors of bone presenting the typical structure of thyroid tissue but occurring in patients with no demonstrable primary growth in the thyroid gland have been frequently recorded, and Regensburger, in 1911, collected from the literature the records of 59 cases of this interesting condition.

Kolb (Beitr. z. klin. Chir.) records another case, that of a patient 73 years of age, who for three months had noticed a steadily increasing swelling on her head in the region of the left parietal bone. Sarcoma of the parietal bone was diagnosed and a radical operation was undertaken, but the patient died on the day following the operation. Histological examination of the tumor showed it to be composed of typical thyroid tissue, without any evidences of malignancy. At the section small nodules of similar thyroid tissue were found throughout both lungs. In the thyroid gland, a portion of which had been removed seven years before for a simple goitre, no signs of malignant change could be found. Such tumors are undoubtedly metastatic, but the primary growth in the thyroid is frequently so small as entirely to escape notice during life, and even, as in Kolb's case, to elude detection post-mortem. Thyroid metastases appear to have a great predilection for the bones of the skull and vertebral column.

Of the 59 cases recorded by Regensburger the secondary growth was in the cranial bones in 25 and in the vertebræ in 20 cases. Owing to the slow rate of growth usually displayed by these bony metastases Kolb recommends removal by operation if there be but one secondary growth. In several cases where this has been carried out recurrence has not taken place until two or three years later. These facts serve to show that in the diagnosis of bony tumors the possibility of a metastatic growth from a cryptic thyroid tumor should always be borne in mind, and that only by the removal and microscopic examination of a portion of the growth can certainty in diagnosis be attained.—Edinburgh Medical Journal.

Pulmonary Tuberculosis.

The author produces evidence distinctly in favor of the use of tuberculin in connection with sanatorium treatment. With early cases (61 in number), the 50 per cent. of cases treated without tuberculin who lost their tubercle bacilli was increased to 66.6 per cent. upon the addition of tuberculin. With the moderately advanced cases (157), the 16.8 per cent. treated without tuberculin who lost their tubercle bacilli was increased to 33.8 per cent. by the addition of tuberculin. With the very advanced cases (67) there was no difference between the tuberculin-treated and non-tuberculin-treated cases. Now and then a case of very advanced disease would lose its bacilli, but for the most part alleviation of symptoms and some prolongation of life was all that could be looked for in the way of improvement.

The addition of tuberculin to sanatorium treatment thus increases the chances of clearing the sputum of tubercle bacilli by some 16.6 per cent. in the case of patients suffering from early disease, and by some 17 per cent. in the case of patients suffering from the disease in its moderately advanced stages. This is a material gain, the significance of which is emphasized by the excellent after-history records of the patients who lost their bacilli as the result of treatment.—Bardswell, in *The London Lancet*.

Treatment of Gastrointestinal Hemorrhage.

The large percentage of cases in which serious gastrointestinal hemorrhage is preceded by the appearance of occult blood is emphasized by the author. In his cases of gastric cancer this sequence occurred in 94.5 per cent. Such occult bleeding should be dealt with as though it were a marked

hemorrhage. The patient should remain in bed on a diet consisting of 3 or 4 liters (quarts) of milk, with Carlsbad water, with or without salt, until no occult blood can be detected for three or four days in succession. Where the disorder present is cancer, and visible hemorrhage takes place, the latter, though not often serious at any given time, is likely to continue for an indefinite period. If operative treatment is not possible, liquid food and eggs should constitute the chief elements of the diet.

Enlargement of the liver or spleen in conjunction with gastrointestinal hemorrhage should also suggest syphilis. If the Wassermann proves positive, excellent results from specific treatment may be obtained.

In severe gastrointestinal hemorrhage from whatever cause, the food allowance should be strictly limited to cold tea, ice-cold milk or egg-white jelly, taken regularly in very small quantities. Nutrient enemas are of little value. Normal saline solution introduced into the bowel by the drop method, however, is of great value. One liter should be given each day, and to it 15 drops of 1:1000 epinephrin solution may be added with advantage. An ice-bag may also be employed. In severe cases gelatin should be given, though its utility is doubtful. Rectal injections of calcium chloride may be given. Where palpation shows that there are clots in the stomach and these are maintaining local irritation, the organ should be washed out with ice-water.

In hemorrhage due to hemorrhoids, the author sets great store on rectal injections of pure crystallized calcium chloride. Given systematically such injections have proven so efficient in his hands that for some years he has not had occasion to recommend operation to any hemorrhoid cases for bleeding alone.—Boas, *Berliner klinische Wochenschrift*.

Laryngeal Tuberculosis.

The benefit to the larynx of life in unvitiated air, as well as voice rest, is emphasized by the author. Where the former is not possible, laryngeal catarrh may be relieved by the use of cleansing alkaline sprays, followed by a spray of liquid petrolatum containing menthol (10-20 grains to the ounce); chlorotone, and antiseptic oils. Local cough and irritation will nearly always cease with general care and hygiene, but simple lozenges of glycerin, phenol, menthol, licorice, or lemon may be used. Those containing heroin (gr. 1-12), codeine (gr. $\frac{1}{8}$ - $\frac{1}{4}$), morphine (gr. 1-40-1-12), or cocaine (gr. 1-10) may be employed.

Where there is dysphagia, the food should

be soft and well masticated. The pain of deglutition can sometimes be relieved by getting an assistant to stand behind the patient, and make firm and even pressure at the angle of each jaw at the moment of swallowing; or, Wolfenden's position may be adopted: the patient lies prone on a couch, with the face over the end, and sucks the nourishment through a glass tube from a cup on the floor. Relief to dysphagia may also be obtained by a laryngeal insufflation of 4 to 5 grains of aresthesia. If given an hour before the chief meal of the day, this may furnish twenty-four hours' comfort. It is only effective, however, when there is ulceration. Pain may also be alleviated by injections of alcohol into the superior laryngeal nerve. Sprays of cocaine (2 per cent.) and insufflations of morphine (gr. 1-16- $\frac{1}{4}$ with gr. ij of starch) should be reserved for hopeless cases.

Dyspnea from stenosis will frequently subside with strict local and general rest. When stridor becomes marked, interfering with sleep, rest, or circulation, a median tracheotomy should be carried out, under local anesthesia.

The galvanocautery has been shown to be a valuable method of cure in many expert hands, when employed in select cases in which the larynx and general condition warrant local interference. The electrode, brought to a white heat, is thrust into the diseased area in several points, under cocaine anesthesia. Several sittings at intervals of two to four weeks may be required, and a cure may occupy anything from three to twenty months. Curetting is also a local measure suitable for removing broken-down granulations or fungating areas.

Pregnancy generally contraindicates active local treatment, but tracheotomy may be necessary. The induction of abortion or premature labor is not warranted, as the disease advances just as rapidly when the uterus is emptied. Pregnancy is to be avoided in cases of laryngeal tuberculosis, and nursing should be forbidden.

Treatment with tuberculin has not, in the author's experience, fulfilled the high hopes entertained of it. A few cases are improved by it, in other cases the treatment has to be discontinued, and in the larger number of cases the effect is nil.—Thomson, in *The London Practitioner*.

Rheumatic Neuritis.

Poynton observes there occur sometimes in childhood examples in which the stress of rheumatic infection falls upon the nerve-trunks. Presumably a certain degree of interstitial neuritis is the result. Severe nerve pains may arise, and irritation may

produce facial spasm or blepharospasm, or neuralgic pains with sudden local œdema. In adults we are acquainted with such a condition producing intolerable pain in the head and scalp with the formation of intensely tender nodes along the course of nerve-fibres. Occasionally these small tender nodes occur also in childhood. They are cases which may prove very intractable and prone to relapse.

Headache has long been recognized as a trouble to rheumatic children. It is one of the most frequent of the early signs of chorea; and is then usually dull and rather persistent. Migrainous attacks are another symptom. These may be very severe in anæmic rheumatic children suffering from aortic regurgitation, and may mark the commencement of a relapse. They would appear to be a part of that general nervous instability which is such a feature in some of the more delicate rheumatic children.

Phenacetin and caffeine relieve the pain better than aspirin or salicin and should the attacks increase in frequency they are valuable warning to the physician that the child should have a short but complete rest.

Habit spasm or facial tic is more frequent in rheumatic children than in others and it may be extremely difficult to differentiate it from true chorea, and that what one has taken to be a facial tic in a rheumatic child may be followed by true chorea.—British Journal Children's Diseases.

Epilepsy.

The author reports his experience with the administration of a solution of 1 part of phosphorus in 10 parts of oil in a series of 9 severe cases of epilepsy, of long standing. In 6 of these cases the phosphorus was administered for over a year. In 3 cases the frequency of the convulsive attacks was diminished by about two-thirds, and in 3 by 30 to 40 per cent. In 3 others there occurred a less marked improvement. The severest cases appeared to be the most benefited. Autointoxication of intestinal origin is an important factor in the induction of epileptic attacks, and this should, of course, be corrected before the phosphorus treatment is commenced.—Leubuscher, *Deutsche medizinische Wochenschrift*.

Gangrene of the Foot.

The case is reported of a man 54 years of age in whom arteriosclerosis caused lesions of one of the lower extremities, requiring removal of the toes and later amputation of the thigh. Evidences of an oncoming similar condition in the other limb being observed, and such measures as the application of heat, raising the extremity, etc.,

yielding no benefit, alternate hot and cold baths were tried. The leg, up to the knee, was placed alternately in two high receptacles filled, respectively, with water at 35° C. (95° F.) and water of the usual temperature. In the receptacle with warm water, the temperature of the latter was gradually raised to 55° C. (131° F.), while cold water was added in the other receptacle to keep the temperature down. For over a year such baths have been employed by the patient morning and evening. At each sitting the procedure of alternate immersion in the two receptacles is repeated 30 to 50 times. As a result of the baths the pain promptly left, the leg regained normal red color, and no tendency to gangrene has been manifested. Pain was also overcome in other cases in which the gangrenous process was too far advanced to yield. M. Borchardt (*Zentralblatt für Chirurgie*, March 1, 1913).

Other observers point out the fact that by having the patient alternately lower his leg and raise it to the horizontal position an effect is obtained similar to that of alternate hot and cold baths. A species of "gymnastics" of the involved vessels is executed, and the pain overcome. The alternate baths were also employed with benefit. Thus a case is reported in which baths in hot and cold water each of three minutes' duration, repeated three times, and continued daily for some weeks resulted in almost complete recovery of the feet of a soldier after gangrene from congelation appeared already to have set in.—Moszkowicz and Frank, *Zentralblatt für Chirurgie*.

Diphtheria in Different Forms.

Rolleston has collected some interesting data on diphtheria.

During 1911 there were 5,034 cases admitted to the Metropolitan Asylum's Board Hospitals, London, as compared with 3,634 during 1910. Exclusive of purely bacteriological cases the percentage mortality was 8.5. The mortality at the various hospitals ranged from 7.4 to 10.8 per cent. Among 862 laryngeal cases there were 135 deaths, a mortality of 15.6 per cent. On 297 tracheotomy, on 56 intubation and on 20 both operations were performed, among whom were 81, 4 and 14 deaths respectively. The percentage error in cases admitted was 12.7. Among the 753 wrongly certified as diphtheria were 485 of tonsillitis, 47 of laryngitis and 22 of bronchopneumonia; 24 had no obvious disease or were not diagnosed. Of complications paralysis occurred in 11.5 per cent., albuminuria in 12.5 per cent., and otitis in 5.3 per cent. Serum rashes were noted in 30.6 per cent., joint pains in 5.1 per cent., and abscesses at the injection site in 0.4 per cent.

Sixteen cases of malignant diphtheria were treated at the Hospital Bretonneau in children aged from one to eleven years, ten of whom died. Cases were most prevalent in large families in which the children received little attention. Late and inadequate doses of serum were partly responsible for the high mortality. The gravity of the cases was due to diphtheritic intoxication and not to association with other microbes. In a large number death occurred early, before the throat had become clear or even before the membrane had begun to loosen, and was usually preceded by one or more of the following signs: vomiting, precocious paralysis of the palate, and abundant albuminuria. In several cases death occurred while the throat was being syringed. The symptoms were due to bulbar intoxication in the first place and possibly also to suprarenal insufficiency. As treatment, large and early doses of serum are recommended associated with suprarenal opotherapy.

A girl, aged 12, ran a splinter into her foot in the middle of January (*Hospitalstidende*, 1912, LV). On the 31st there was an ulcer 4 by 2 cm. on the side of the foot, covered by a yellowish exudation. There was a profuse discharge of pus from the ulcer and the loosened epidermis. The wound slowly cleared up under local treatment, but some time between February 24 and March 3 the child found that she could neither read nor write. In addition to paresis of accommodation, the heart was found to be dilated and the pulse rapid, small and irregular. The ocular palsy lasted for about three weeks and cleared up without treatment, and the cardiac condition lasted for a few weeks longer. No bacteriological examination was made, as diphtheria was not diagnosed until after the onset of paralysis, when the wound had healed.

Dreyfuss records a fatal case of anaphylaxis in a boy, aged 7 years, suffering from moderately severe diphtheria, who one year previously had received a prophylactic injection of 150 units of diphtheria antitoxin, (*Munch. med. Woch.*, 1912, LIX). In one and a half to two minutes after the second injection the child complained of itching in the legs and trunk, and this was rapidly followed by vomiting, clonic convulsions of the limbs, loss of radial pulse, dilated pupils and unconsciousness. Dreyfuss recommends that in cases that have been previously injected the serum of a different animal should be employed.

Calcaterra records some interesting observations at the Pediatric Clinique at Bologna (*Riv. di Clin. Ped.*, No. X, 1912). In 61 cases injected on the first day of disease the percentage of paralysis cases was

1.6, in 377 second-day cases it was 9.5, among 257 third-day cases 16.3, among 101 fourth-day cases 21.7, in 52 fifth-day cases 15.3, in 19 sixth day cases 26.4, and in 13 seventh-day cases 15.3. Large doses of serum, though they did not always succeed in preventing paralysis, considerably diminished their gravity. A bivalent serum, i.e., one with antitoxic and bactericidal properties, did not possess in this respect any advantage over ordinary antitoxin. Twenty-two cases received intra-spinal injections as well as subcutaneous. This new method did not prevent the appearance of generalized paralysis or appear to render it less severe. Two of the cases so treated showed signs of transient meningeal irritation, revealed by headache, vomiting, nuchal rigidity and Kernig's sign. Ten cases of diphtheritic paralysis were treated with subcutaneous injections of serum. Almost all showed signs of anaphylaxis, and none showed any improvement that could be attributed to the serum. Calcaterra agrees with Mya that serum-therapy in diphtheritic paralysis is useless.

Lydia M. DeWitt (Journ. Infec. Dis., No. X, 1912), in a series of 175 cases of diphtheria, found that the duration of the Klebs Loeffler bacilli was less than thirty days in 63 per cent., between fifteen and thirty-five days in 87 per cent., under fifteen days in only 12 per cent., and over forty days in 12 per cent. The work on the treatment of diphtheria carriers with a staphylococcus spray (as reported in Brit. Jour. of Child. Dis., 1912, No. IX) induced her to carry out experiments to determine whether an antagonism existed between *Staphylococcus aureus* and Klebs Loeffler bacilli. Test-tube experiments showed that the organisms grew well together, and that a killed *staphylococcus* culture formed a good medium for the growth of diphtheria bacilli. Experiments on rabbits and guinea-pigs showed that though Klebs Loeffler bacilli frequently disappeared more quickly in animals treated with *staphylococcus* cultures than in those untreated, this result was not constant, and the clinical symptoms were often more severe under *staphylococcus* treatment. In 28 per cent. the diphtheria bacilli persisted longer in the treated than in the untreated cases. In two diphtheria patients in whom she employed the treatment, diphtheria bacilli reappeared after two negative cultures had been obtained. The writer suggests that the apparently favorable action of *Staphylococcus aureus* is due, not to an incompatibility between the two organisms, but to the reinforcement of the normal throat flora.—Brit. Journ. Children's Diseases.

Studies on a New Method of Injecting Neosalvarsan in Concentrated Solution.

Ravant and Scheikevitch, of Paris, give the technique of a new method which is very simple. A 10 to 15 c.c. glass cylinder is filled with the necessary amount of freshly distilled water, and in this the neosalvarsan almost instantaneously dissolves. The solution is injected into a vein of the arm by means of an all-glass syringe. The whole procedure requires not over a minute and a half. The 10 c.c. of water are used for 0.75 gram neosalvarsan or even for 0.9 gram, these concentrations being well borne. Ravant gave 228 injections without any immediate reactions and no sensation of pain. The patients either went to bed after the injections or left for their homes. No action whatever on the vein could be observed, although some patients were given as many as six injections in the same region. (Owing to the elimination of Wechselmann's Wasserfilter (dead bacteria in the water) and the absence of impurities of water or sodium showed a very uniform regularity of the after effects could be observed. Especially after the first injection rise of temperature, nausea, vomiting and diarrhoea were noticeable, which were less after repeated doses. In conclusion the authors say their method takes away the uncertainty (danger) of the composition of distilled water. Oxydation is hardly possible. The very simple apparatus can be easily sterilized.—*Annales de Dermatologie et de Syphiligraphie*.

Rectal Use of Salvarsan in Children.

Weill, Morel and Mouriquand on account of the difficulties of giving salvarsan to children intravenously gave it per rectum and found a total absence of any rectal or general reaction even after injection of 40 cgm. The patients were from 10 to 13 years old. A dose of 10 cgm. was first given, a second of 20 cgm. and a third of 40 cgm. Ehrlich's technic was followed as for intravenous injections, five to ten drops of laudanum being added to the solution to ensure rectal tolerance. They found it must be retained four hours at least. It was shown that salvarsan was easily absorbed by the mucous membrane of the child; that this absorption caused amelioration of a marked character in certain cases of hereditary syphilis and severe chorea. Excepting in urgent cases the rectal route is to be preferred in children, as it has sufficient activity without producing a reaction.—Lyon med.

Role of the Wassermann in Hereditary Syphilis.

Andronesco and Saratzeano tested twenty-two children and thirteen mothers by Wassermann's original method. In eighteen of the children and twelve of the mothers there was a positive reaction. The father's blood was examined in two cases and found positive in one. The one negative maternal case was not one of syphilis either in the parent or child. Several of the children who reacted positively were suffering from diseases of doubtful etiology, e.g., Little's disease, alternating hemiplegia, and hæmophilia. The authors' conclusions are as follows: (1) Colles' law is quite correct; (2) mothers of syphilitic children give as positive a Wassermann as cases of florid syphilis; (3) the number of births has no influence upon the reaction; (4) the Wassermann reaction is more intense in congenital syphilitic children than in their mothers who are free from visible lesions. —*Presse med.*

Congenital Syphilis Treated by Neosalvarsan.

Bunch (*Brit. Journ. Child. Dis.*) reports a girl, aged 2 years, who on admission to hospital was suffering from an offensive muco-purulent discharge from the nostrils, malnutrition, and well-marked condylomata round the anus. The Wassermann reaction had been markedly positive, and on Oct. 30th she was given a dose of 0.45 gm. neosalvarsan intravenously into the median basilic vein. No ill-effects of any kind followed the injection. The child left the hospital two days afterwards with the syphilitic symptoms greatly improved, and a week afterwards the condylomata and muco-purulent rhinitis had disappeared.

On November 13th a second injection of 0.45 gm. neosalvarsan was given, this time intra-muscularly into the right buttock. The child had steadily improved in general health and had put on weight. The Wassermann reaction was negative.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are

made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

The Isolated Active Principle of the Hypophysis.

Fuhner, of the University of Freiburg, says it has been known for a long time that extracts from the posterior lobe of the hypophysis possess, along with other pharmacæutic activities, the property of giving rise to alterations in the blood pressure and contractions of the uterus.

The preparations now on the market under various designations represent nothing more than dilute extracts of the infundibular portion. These extracts are so prepared that 1 Cc. of liquid corresponds to 0.1 or 0.2 Gm. of infundibular substance.

Since there are to be found in the hypophysis inactive as well as active substances, and since a simple method of valuation of hypophysis extracts is unknown, there is naturally a wide range of activity to be found in such extracts, which makes itself felt to a disturbing extent when the preparations are employed in therapeutics.

Fuhner set about to isolate the active principle and successfully accomplished his desire after a long series of experiments.

He succeeded in decomposing the albumen free extract of the infundibular portion of the hypophysis into eight different constituents. The intensive action of hypophysis extracts on the uterus is due unconditionally to four constituents which he describes in detail. They are precipitated by phosphotungstic acid, while those left in the filtrate do not come into practical consideration.

As the uterine action of the hypophysis does not appear bound up in any single constituent, but, as in the case of ergot, is divided among several substances, and as these do not show qualitative but only quantitative differences in the direction mentioned, it is probable that these in their action potentize reciprocally, and it is, therefore, unsuitable to apply them separately in therapeutics. Hence the sulphate which, as Fuhner's investigations show, always possess a uniform composition, and can be obtained in chemically pure crystals, has been given to the medical profession under the name of hypophysin in the form of a sterile 1:1000 aqueous solution, so that 1 Cc. contains uniformly 1 mg. hypophysin. This concentration was chosen because ex-

periments instituted with hypophysin in gynecologic clinics, have shown that 1 mg. of this preparation exerts at least the same action as 1 Cc. of an unobjectionable well-acting extract of hypophysis. 1 Cc. of which corresponds to 6.2 Gm. of fresh gland substance.

As, however, hypophysin is accurately measurable and as in consequence its solutions may be prepared always with the same contents of active constituents—which is not the case with absolute certainty with extracts—one has in employing hypophysin solutions an absolute guarantee of a preparation of constant uniform composition.

The quantitative pharmacological investigation of hypophysin has thus far extended to its action on blood pressure, respiration and the uterus. Especially characteristic of hypophysis extracts is their action on blood pressure and respiration in rabbits after intravenous injection, which has recently been studied accurately by Fuhner and Pankow,

As an oxytocic hypophysin seems to be an unqualified success. It is non-toxic and when injected into the uterus it has a marked effect.—*Deutsch. med. Woch.*

Cutaneous Reaction to Tuberculin in Childhood.

Lapage believes thoroughly in the use of tuberculin in children and emphatically states that all tubercular cases give a reaction. He finds the cutaneous method more suitable for practical purposes, even though the subcutaneous methods give the highest percentage of results. He summarizes his experimental investigations as follows:

The results of the clinical examination and the tuberculin test are confirmatory of one another, the reaction occurring far more frequently in those showing symptoms pointing to tuberculous infection.

The x ray examination and the cutaneous tuberculin test correspond fairly closely if their results are properly interpreted.

A reaction indicates that the subject has been infected with tuberculosis and does not mean that the disease is progressive or even active.

We have at present no method of performing the test to afford us a means of distinguishing between active and passive disease.

A marked reaction or a reaction in a healthy person may be of good import and need not bear a sinister interpretation.

Slight reactions seem to occur more often in cases negative or only possible clinically.

A negative result may follow the test in children infected with tuberculosis: (1) if the disease is advanced; (2) if there is cachexia; (3) in very acute disease; (4) in

mixed infections or cases complicated by acute disease.

A single negative test does not exclude tuberculous infection, repetition of the test increasing the percentage of positive results considerably (28 per cent.).

Even a negative result on repetition of the test does not always exclude infection, because some cases are only positive on the third application and others, positive to x ray examination, but neither advanced nor cachectic in nature do not react to repeated tests. Therefore, judged by the x ray examination, the cutaneous tuberculin test cannot be regarded as absolutely reliable in excluding tuberculous infection. There is greater difficulty in diagnosing occult tuberculosis after the age of two years. In indicating tuberculous illness the test is of greatest value in young children.—*Brit. Jour. Child. Dis.*

Case of Ossification in the Brachialis Anticus.

Corner reports the case of a young man who fell on his hand a few months ago, fracturing the lower end of his radius. There was no complaint of any injury or pain in the neighborhood of the elbow-joint. Later the patient discovered a painless lump in front of the elbow. A skiagram showed that this lump was due to some ossification in the brachialis anticus muscle. Presumably this was the result of a partial rupture of the muscle, done unconsciously at the same accident.—*Proceedings of the Royal Society of Medicine.*

Hemorrhage into the Right Vocal Cord, the Result of an Accident at Football.

Mollison, who reports the case of a student at Guy's Hospital who, while playing football a week previously received a kick in the neck on the thyroid cartilage, a little to the right of the middle line. He experienced a feeling of shock and of suffocation; this passed off, and he found his voice was very weak; he had, too, considerable pain on swallowing, and had a constant desire to swallow. Seen within an hour of the accident he could scarcely speak, and an examination of the larynx showed slight swelling of the right vocal cord. On attempted phonation the cords approximated but the arytenoids were not symmetrical, the right getting a little in front of the left (this is no doubt a normal abnormality in this case). Two days after the accident the voice was still weak, but normal in character, and the patient felt well, though on walking he again experienced a feeling of suffocation, but in much less degree than before. The larynx then and now showed

hemorrhage into the right cord, while the left was normal.—Proceedings of the Royal Society of Medicine.

Avicena" (The supper has killed more than Avicena cured) is a popular maxim.—British Medical Journal.

The Intellectual Standard of Doctors.

There is not the slightest reason to believe that physicians are linguistically inferior to parsons or lawyers. The assertion that English doctors are inferior in general culture to their French and German brethren is entirely unwarranted by facts. It is true that many of the keenest minds of the nation are attracted to fields of activity which offer a better financial return. But fortunately many men of intellect are attracted to the profession by the interest of the work, and it would be strange indeed if medical men whose education is more elaborate and costly than that of any other class of the community should have a lower intellectual standard than that of other professional men. It is recorded by Boswell that Johnson "in general had a peculiar pleasure in the society of physicians." Sir James Paget, as is mentioned in his "Memoirs and Letters," sat one evening at that very select club, Grillon's, between Gladstone and Matthew Arnold. The talk turned on professions, and Gladstone said that medicine, steadily developing and improving, was the profession of the future. Arnold said he had been much impressed in America by the superiority of the doctors over the clergy and the lawyers. As regards classical culture in particular, that is becoming more and more the appanage of a highly specialized class. Members of Parliament no longer quote Latin, and the time is long past when, as Sydney Smith said, a false quantity in early life is a stumbling-block in the career of a politician.—British Medical Journal.

Proverbs Relating to Diet.

There is a maxim ascribed to Theognis, according to which "Surfeit has killed many more men than famine," and Hippocrates had an aphorism that "Everything in excess is inimical to Nature." The former maxim finds modern equivalents in "Surfeit slays mae than the sword" (a Scottish proverb from Ray's collection), and a Latin counterpart in "Non plures gladio quam cecidere gula." Two other Latin proverbs put the same idea in different words: "Multo plures satietas quam fames perdidit viros" and "Multos morbos multa fercula fecerunt." A laconic adage says, "Much meat, many maladies"; an outspoken one says, "Quick to the feast, quick to the grave"; and a farseeing one announces that "Feastings are physicians' harvests." The Spanish rhyme "Mas mato la cena che curo

Leucocyte Inclusions in Surgical Diseases.

Nacciarone notes that in various surgical diseases inclusion bodies are found in the polymorphonuclear leucocytes. The inclusion bodies described by Dohle are therefore not peculiar to nor pathognomonic of scarlet fever. The absolute number of these inclusions and their predominating variety bear no relationship to the various types of cell present, nor do they vary according to the different stages of the disease. The author regards the inclusion bodies as certain resistant forms of parasites.—La Riforma Medica.

The Cerebrospinal Fluid in Simple and in Ophthalmic Migraine.

Sicard states that during an attack of simple migraine the cerebrospinal fluid shows neither lymphocytosis nor hyperalbuminosis and has the normal content in urea and glucose. Occasionally its pressure is increased. On the contrary, during a crisis of ophthalmic migraine, the cerebrospinal fluid may be normal, or it may show a hyperalbuminosis with a lymphocytosis. In the former instance the prognosis is favorable, the ophthalmic migraine being but a "neuro-arthritic" episode. In the latter instance the findings indicate an organic meningocortical reaction of syphilitic or tuberculous origin.—Gazette des Hopitaux.

The Clinical History and Morbid Anatomy of a Case of Generalized Scleroderma with Severe Muscular Atrophy.

Collier and Wilson report a case of this condition. They state that generalized scleroderma with affection of the muscles is a rare disease and there have not been many pathological investigations of this interesting condition. The case they report is peculiar in that it differs from the group described as "dermatomyositis" in the absence of an acute onset, the absence of acute pain, muscular tenderness, and swelling of the muscles, and the absence of subsequent hardening and contracture in the affected muscles. It is further peculiar in that the distribution of the muscular affection was much more extensive than was the skin affection. In most of the reported cases of scleroderma with myosclerosis the muscular affection has been co extensive with the skin affection and this has given rise to the opinion that the myosclerosis re-

sulted by an extension of the sclerotic process from the skin to the underlying muscles. Brocq, however, has shown that the muscle affection is apart from the skin affection and that the former may be much more extensive than the latter. He considers that an "infiltration" of the muscle comparable with the edema of the skin occurs at first and that this is followed by sclerosis, and his views are echoed by Dinkler, Rosbach, and Unna. The authors have been able to find one case only in the literature of the subject which is comparable to the case that they report and this was recorded by J. A. Nixon, but in Nixon's case the skin was adherent to the underlying tissues, and contractures were present though the muscles were intensely wasted. This case was not investigated pathologically.—Proceedings of the Royal Society of Medicine.

Treatment of Burns by the Application of Alcohol.

In the Australian Medical Journal Milligan has described a method of treating burns which he has found more satisfactory than the current methods. In burns of the second, third and fourth degree, cleansing with antiseptic lotions is usually recommended. The moisture causes the sloughs to become septic—in other words, converts dry into moist gangrene. Frequent and painful dressings are then necessary. Dr. Milligan excludes water from the treatment, and applies alcohol. He thus prevents moist gangrene and inflammation and saves much suffering. A child, instead of spending several months in hospital, can soon have the burn grafted and run about. The details of the method are as follows: If the patient is in such a state of shock that he cannot stand an anesthetic, a watery saturated solution of picric acid is applied on lint and protective is put over this to prevent evaporation. On the next day the protective is lifted and more of the solution is poured over the lint, which is not changed. On the third day the patient is either obviously going to die or can stand an anesthetic. If the picric acid be continued any longer the burn will become offensive. Milligan has not found the picric acid treatment of burns satisfactory, and simply uses it in the absence of anything better for a patient in a condition of shock. Moreover, the acid is absorbed and may cause toxic symptoms. If the patient is in a condition to allow the administration of an anesthetic he is given chloroform, and the burns are cleansed with sterile gauze wrung out of 70 per cent. alcohol. The whole surface of the burn and the surrounding skin is rubbed vigorously. Blisters are rubbed off

with all dead tissue. No blister is pricked, nor is the dead skin allowed to remain to keep fluid pent up only to be infected by the organisms of the skin. Dead tissue is more effectively and easily rubbed off than removed with scissors and forceps. After thorough cleansing a dressing of sterile gauze wrung out of the alcohol is applied. Over this dry gauze and wool are applied, and then a bandage. Under chloroform the same process is repeated daily. Every other day will not do, for the burn begins to be septic and offensive. The parts are rubbed, not wiped, with gauze wrung out of alcohol. On beginning to remove the dressing it will be found stuck to the surface. By pulling upon it bits of dead tissue are satisfactorily removed. The dressings are continued for about eight days, when burns which have not destroyed the whole thickness of the skin will be found in such a clean state that boroglyceride gauze or gutta-percha tissue can be applied as a dressing without any pain. It is striking how rapidly the burns now heal under the boroglyceride. If they become infected again, one cleansing with alcohol, followed by one alcohol dressing will render them again aseptic. Burns which involve the whole thickness of the skin take longer on account of the sloughs. Under the alcohol treatment these become black, dry, and shrivelled up, and can be torn off or dissected with a sharp scalpel and forceps. Valuable time will be lost if the surgeon waits for the sloughs to separate. The best results following the cutting off of the sloughs, for they are not sodden, and the surface is aseptic. A scalpel must be used, for it leaves a clean cut, with no track of dead and injured cells as a scissors does. Dr. Milligan has employed this treatment during five months for a great number of burns in the Children's Hospital, Melbourne. One case of extensive and deep burns was fatal. Two large duodenal ulcers were found at the necropsy, but at the time of death (twelfth day) the burns were in an aseptic state, with all the sloughs removed. In all the other cases healing was most satisfactory. They included burns and scalds of almost all parts of the body, some deep, some on the face, and some on the buttocks, where cleanliness is difficult to maintain in young children. The daily use of chloroform did not prove in any way injurious. There was never any vomiting to interfere with the taking of food, so necessary for a burnt child. Anesthesia must be employed, otherwise the application of alcohol would be too painful. When the children recover from the anesthetic they feel no pain, and are quite happy.—The London Lancet.

Therapeutic Action of Splenic Extract.

H. R. Harrower gives the following summary of the actions of splenic extract, as a result of the analysis of nearly fifty communications on the subject. Its value is due presumably to certain splenic hormones on which, in a degree, the following phenomena are dependent. 1. Leucocytosis, phagocytosis, and possibly hemoglobin-formation and iron metabolism; 2. tryptic digestion, thus directly increasing assimilation and nutrition; 3. Intestinal digestion and the production of enterokinase; 4. the process of healing, both as regards the cessation of hemorrhage and the production of rapid connective tissue formation; 5, increase in the functions of the spleen itself. These actions are all held to be the grounds for the beneficial effects of splenic extract in pulmonary tuberculosis, and to them there is to be added the fact that the extract exerts antagonism to the tubercle bacillus by an influence on its culture medium in the body, due to production of a colloidal substance.—Lancet, London.

Gold Salts in Malignant Tumors.

Experimental studies upon the effects of various gold salts on the malignant tumors of animals have been made by C. Lewin. He employed gold and sodium chloride, colloidal gold and gold and potassium cyanide intravenously. The effects of these gold salts were very pronounced in the carcinomata of mice. After as few as two intravenous injections, degenerative changes are very apparent; hemorrhages takes place into the tumor and the specific cells become necrotic. After three or four tumor injections, even hard tumors may be converted into cystic structures filled with cell detritus. It seems as if the gold salts had a specific toxic action upon the capillaries of the tumor and not upon the tumor cells, as has been claimed for other metallic salts. The capillaries of tumors are particularly vulnerable since they are the most recent in the organism and probably have insufficient resisting powers owing to their rapid growth.—Berl. Klin. Woch.

State Board Examination Questions of Virginia.

MATERIA MEDICA.

1. What is meant by the incompatibility of drugs, and give an illustration?
2. Name, with dose of each, the official preparations of opium and its alkaloids.
3. Define digestants. Name two that are frequently prescribed, stating the best time for administering same.
4. What is caffeine and what are its medicinal uses?

5. Give the preparations and doses of hydrastis.

6. What is paraldehyde, and what its classification as a drug?

7. Describe in detail (noting the usual precautions and contra-indications) the administration of ether by inhalation.

THERAPEUTICS.

1. Write one prescription for a stimulating expectorant and one for a sedative cough mixture.

2. Formulate a compound cathartic pill containing three ingredients in proper doses, acting on different parts of intestinal canal.

3. What are the uses of nitroglycerine in medicine, and by what other names is it known?

4. Which preparations of mercury are used as cathartic, which as alternative, and which is emetic?

5. Give the strength of following solutions: (a) Nitrate of silver for ophthalmia neonatorum; (b) cocaine hydrochlorate for local anesthesia; (c) sulphate of zinc for conjunctivitis; (d) bichloride mercury as uterine douche.

TOXICOLOGY.

1. Give cause, symptoms and treatment of ptomaine poisoning.

2. Name four most prominent poisons and give their respective antidotes, chemical and physiological.

3. What is active principle of belladonna, giving symptoms of toxic dose and treatment?

MEDICAL JURISPRUDENCE.

1. Give the more important steps in post-mortem examination in case of suspected poisoning.

2. What are the signs of drowning?

3. What constitutes malpractice?

4. State the essentials of a dying declaration.

5. Give briefly technique of determining whether a given stain be that of human blood.

QUESTIONS ON HYGIENE AND PREVENTIVE MEDICINE.

1. How would you disinfect after a case of tuberculosis?

2. Describe the management of an outbreak of diphtheria in a school.

3. In inspecting the source of a water supply, what would you look for?

4. What diseases are spread by the house fly?

5. How is ophthalmia neonatorum contracted and how prevented?

CHEMISTRY.

1. Discuss chlorine, manufacture, proper




MALNUTRITION

is so generally recognized as the main causative factor in many serious diseases—notably **tuberculosis, typhoid fever** and other **infectious ills**—that the first evidence of its development should always lead to its vigorous treatment. Fortunately the practitioner has in

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a dependable means of so stimulating the physiologic processes of the body that malnutrition and debility can be promptly overcome and the whole organism given new and increased power of resisting disease. Thus, "Gray's" can be relied upon not only to restore the vitality of the body but also to fortify it against germ attack.

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Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

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ties, and uses.

2. What do you mean by valence? Give valence of N, O, Cl, and Fe.

3. $C_{12}H_{22}O_{11}$ with heat and dilute acid=

4. Name total number of elements, giving those which are (1) gaseous and (2) liquids, and tell how the atomic weight of an element may be found.

5. Discuss chemistry of bread making.

6. Name four of the fatty acid series, and give formula and preparation of one.

7. How is KI. made, and give properties and uses?

8. Name two chief gases used for illuminating purposes, and give the chemical differences.

9. Name three substances precipitated by H_2S and how distinguished.

10: Define: 1Argol. 3Corundum. 5 $C_3H_5(OH)_3$. 2Benzine. 4Alizarin. 6Pearlash.

11. Give a chemical test for presence of strychnine.

12. Give a chemical test for chloesterin in faeces.

PATHOLOGY AND BACTERIOLOGY.

1. Discuss thrombosis, name the most important factors favoring it, state whether it is most common in the venous or arterial system, and why.

2. Give the pathology of chronic gastritis, and name the most frequent etiological factor of chronic gastric catarrh in adults.

3. The absence of what two reflexes is the most constant of all known symptoms of tabes dorsalis? Etiology of locomotor ataxia; state what part of the cord is involved and pathology of same.

4. In what four ways may metastatic growths originate?

5. Discuss the pathological conditions in the lung you would expect to ensue upon the embolic plugging of one of the larger branches of the pulmonary artery.

6. Give a general description of the blood picture in pernicious anemia. What form of degeneration is found in the heart in this disease?

7. To establish the etiological relationship of bacteria to disease, what four laws has Koch laid down which must be conforming with?

8. Define bacteria, classifying according to form, habitat and oxygen requirements.

9. What are bacterial vaccines? Distinguish between autogenous vaccines and stock vaccines.

10. Name four pathogenic anaerobes. Give the morphology and pathogenesis of any one of them.

PRACTICE OF MEDICINE.

1. Give the etiology of simple acute adenitis, its most common location and its treatment.

2. Define ascites and differentiate it from any two conditions that may simulate it.

3. Give the etiology, symptoms and most usual complications of erysipelas.

4. Give the etiology, complications and treatment of acute pharyngitis.

5 Tell what is meant by normal bronchial and normal vesicular breathing. State frequency of respiration and the pulse-respiration ratio.

6. Define bulimia; papilloma; leukocytosis; ptosis; thrush.

7. Differentiate scabies from pustular eczema.

8. Give the general, dietetic, and drug treatment of a case of pneumonia.

9. Give the etiology and symptoms of acute diffuse peritonitis and differentiate it from acute entero-colitis.

10. Give treatment of enuresis.

OBSTETRICS AND PEDIATRICS.

1. Give your conduct of a case during the last three months of gestation, including your directions as to final preparations for the confinement.

2. Give in detail your management of a case of normal labor from beginning to end.

3. Mention the conditions under which you would rupture the membranes.

4. Describe fully three methods (non-surgical) of protecting the perineum in the delivery of the head in an anterior presentation.

5. Mention six causes of retained placenta.

6. Called to a case a few days after delivery, and finding the mother had a chill, headache, pains in the back and limbs, temperature of a hundred and two or three, lochia normal and no abdominal or pelvic symptoms, what would you most likely find the matter with her and what would be your treatment?

7. What is the corner stone of preventive treatment of puerperal eclampsia?

8. Mention the principal points of difference in acute articular rheumatism in children and adults.

9. In case a mother came to you complaining that her child had severe "growing pains," what would you suspect was the real trouble with the child, and what would be your treatment?

10. Make a differential diagnosis of rubella, and treat the case.

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ANATOMY.

1. What muscles are attached to the clavicle?
2. Classify and describe the wrist-joint.
4. Name the muscles of the orbital region. Give origin, insertion and nerve supply of the external rectus.
4. Locate and describe the gall-bladder.
5. Give the blood and nerve supply of the thyroid gland.
6. Describe the internal or long saphenous vein.

HISTOLOGY.

1. Name the properties of the cell.
2. What is a neuron?
3. From what layer of the embryo is the vascular system derived?
4. How do veins differ from arteries?

SURGERY, GYNECOLOGY, AND GENITO-URINARY DISEASES.

1. Give difference between benign and malignant neoplasms. Give an example of each.
2. Define caries, necrosis. Give changes which take place in bone in each.
3. What tissues are affected in arthritis deformans? What changes take place in the joint?
4. Define true and false (a) neuroma, (b) angioma.
5. What is secondary hemorrhage? Give its cause and treatment.
6. What are the indications, and give method of ligating the common carotid artery?
7. What is a teratoma? Is it congenital or acquired?
8. Differentiate between dorsal dislocation of the hip and tubercular coxitis.
9. What is phimosis? Differentiate between gonorrheal and chancroidal phimosis.
10. What is glaucoma? How would you diagnose it?

GYNECOLOGY.

11. Define pelvic hematocoele, hematoma. Give treatment for each.
12. Describe the three varieties of uterine fibroids; what are the dangers to the patient if they are not removed?

PHYSIOLOGY.

1. What is meant by metabolism? Nutrition? Digestion?
2. What chemical elements enter into the composition of the human body?
3. Give names, location, manner of communication with buccal cavity of salivary glands and function of saliva.
4. Describe the pancreatic juice and the part played by each constituent in digestion.

5. Describe the different blood currents of the heart and the action of the valves during a complete systole.

6. What four factors are essential in keeping up the arterial blood pressure?

7. Why does certain weakened conditions of the heart cause edema or dropsy in tissues of the body?

8. Give distribution of third cranial nerve and the phenomena that occur when it is paralyzed.

9. How many pairs of spinal nerves? What is a mixed nerve?

10. Give the physiology of reducing the body temperature by a sponge bath, when the skin is cold and when it is hot.

EMBRYOLOGY.

1. Describe the fertilization of an ovum. Where may this occur?

2. Describe briefly the formation of placenta. Give its function.

"Solution of Albuminate of Iron" (Liquor Ferri Albuminatis, Flexner.) Contains 13% Alcohol. Each teaspoonful of this preparation represents one gram of Dry Albuminate of Iron in permanent solution. A most valuable form of iron tonic. Prepared by Robinson-Pettet Co., incorporated, Louisville, Ky. (See page xiv this issue.)

Case of Ossification in the Brachialis Anticus.

Corner reports the case of a young man who fell on his hand a few months ago, fracturing the lower end of his radius. There was no complaint of any injury or pain in the neighborhood of the elbow-joint. Later the patient discovered a painless lump in front of the elbow. A skiagram showed that this lump was due to some ossification in the brachialis anticus muscle. Presumably this was the result of a partial rupture of the muscle, done unconsciously at the same accident.—Proceedings of the Royal Society of Medicine.

The Treatment of Facial Hemispasm by Means of Local Injections of Magnesium Salts.

Sicard and Leblanc have reported their results with this method of treatment. They have found that the good effects are only transitory, and are not to be compared with those following the local injections of alcohol in gradually increasing doses.—La Presse Medicale.

Dr. Parran Jarboe announces to the profession that he is now limiting his practice to genito-urinary and rectal diseases. Office and private infirmary, 121 South Elm St., Greensboro, N. C.

Treatment of Acute Abdominal Cases in Children.—Mummery (British Journal of Children's Diseases) says that abdominal cases in children differ from those of adults. Children are very sick or very well. No mental or psychic phenomena complicate the clinical picture, but on the other hand the physical signs and symptoms must speak for themselves. While a correct diagnosis is often difficult, it is also urgent, for it is not possible to temporize and await developments as we often can in adults. The common acute abdominal conditions in children are intussusception, acute appendicitis and, less commonly, acute obstruction of some form.

(1) Intussusception is caused, the author believes, most frequently by some hard material that is difficult to digest. The ileocecal region is the most common site. He has noted in his experience also that it occurs almost entirely in previously healthy robust children. The important symptoms to be borne in mind are the sudden seizure with pain, a small movement of the bowels

Glandular Disorders

respond to iodine more quickly than to any other remedy—particularly if administered in the form of

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The results obtained in lymphangitis, scrofulous adenitis and glandular derangements in general give this well known product first place in the treatment of this class of ailments.

DIRECTIONS.—To obtain prompt and satisfactory results give 5 to 10 drops in a wine glassful of water 4 times a day, increasing a drop each day until the patient is taking 20 drops 4 times daily.

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 As wisdom divines protection—
 Knowledge revealing "per se"
 Chances, of higher perfection.

Gently passing the inner gates
 Where Science flashes through Shadow,
 Trusting not to unknown fates
 He bravely climbs the ladder.

"Man, feeble tenant of an hour,"
 Garners of time, kind surceases—
 Analyzing as a flower,
 Incipient germs—new diseases.

Panaceas of life unknown
 Aroused to electric action:
 Arrayed the field, wisdom hand sown,
 By a hidden complex fraction.

See him tracing an affliction
 That gives pain or sorrow
 Fondling phases with swift perception,
 That may vanish, ere the morrow.

God bless you all, our zealous friends,
 Pursue that path that leads to glory;
 A righteous cause your honor defends,
 As history reveals your story.

"If singing breath or echoing cord
 To every hidden pang were given
 What endless melodies were poured
 As sad as earth, as sweet as Heaven."

WALTER PICKETT MYERS.

containing some red jelly-like material, and the sausage-shaped tumor which may be made out often with the aid of an anæsthetic if not otherwise.

As to treatment, the author believes immediate operation the only advisable procedure. Prognosis is very favorable up to twenty-four hours after onset, but success must not be despaired of absolutely up to three or four days. Chances are small where the intussusception is not reducible and reaction must be done. The important point is to make the operation as short as possible and to handle the parts but little. The author's practice is always to give them nourishment as soon as they can swallow.

(2) Appendicitis in children displays some peculiarities. It is nearly always acute, very frequently gangrenous, the onset is very rapid. An interval operation is not to be thought of in the presence of the acute attack. The relation of rapid pulse with low temperature is in the author's

opinion the most important diagnostic factor. Rectal examination may reveal much in children. A dangerous trap is the mistaking of a rather sudden abatement of symptoms for the passing of some insignificant digestive disturbance, and the failure to operate. The author warns us that not to operate in many cases would mean the death of the child because the temporary remission means the rupture of an abscess.

The author never drains unless there is an abscess and not always then. The post-operative treatment when there is general peritonitis consists in the Fowler position, fluids in quantity and small doses of brandy. Nourishment and castor oil are advised as soon as the acute symptoms have subsided. As a substitute for a laxative the author has used hypodermic injections of pituitary extract with great success. About half an ampoule every four to six hours has made the difference between life and death in some cases, he thinks. It acts by causing peristalsis and increasing the blood pressure.

(3) An exact diagnosis of acute intestinal obstruction from other causes than intussusception is often difficult. But the author points out that it is only necessary to determine whether or not to operate.

Medical Treatment of Gall Stone Diseases.—Bain (The Practitioner, London) after discussing at great length the causes, symptoms and diagnosis of gall stone disease gives tardy attention to the subject upon which he is supposed to be writing.

In the treatment of gall stone disease the first step is to improve the digestion, for until this is done the use of drugs is of no value, this entirely aside from the general improvement in the patient and a consequent improvement in the affected organ. The principles of treatment are to improve the digestion, to foster nutritional efficiency, to disinfect the biliary passages and to correct any injurious habits.

Where there is flatulent distension of the abdomen there should be several rectal douches at a temperature of 104° F., which besides emptying the colon stimulates the musculature of the intestines. The bowels should move daily, and sulphur water, felines or even hot water before breakfast will aid in accomplishing this. The diet must be suited to the individual case, being kept within the limits of the patient's digestive powers, limiting the carbohydrates and fats, forbidding alcoholic drinks and indigestible food. Regular meals at regular hours are of greatest importance. The author believes that there may be a reflex inhibition of the pancreatic functions and therefore administers the pancreatic enzymes with nux, sodium bicarbonate and sodium

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is shown by experience to be a powerful alternative—of the utmost value in late syphilis.

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sulphocarbonate.

Because of its effect on the digestion, mental tranquility is desirable and while exercise is most needful fatigue is harmful. Olive oil helps where there is hyperchloridia and tenderness over the gall bladder is helped by mustard-bran packs which may be persisted in for several days. When the digestion has improved cachets containing cholelin and urotropin may be administered for a continued period, sometimes several months.

Alimentary Anaphylaxis to Eggs.

Lesne and Richet (Archives Medicine des Enfants) say that alimentary anaphylaxis, of which an anaphylaxis to eggs is one of

the most frequent examples, is an affection which has been distinguished for a long time among the group of intestinal intoxications. Richet was the first to show that certain alimentary intoxications were really due to anaphylaxis. This view has been borne out in clinical and experimental studies by a number of men in the last four years.

We know that this anaphylaxis to eggs can be present at any time, and cases in men of sixty years or over have been reported. The most frequent time is in early childhood when it is not at all uncommon. Rosenau has shown that the anaphylactic substance in the albumin of the egg is de-

structible by heat and that the white of the egg is much more liable to produce these symptoms than the yolk. A very small amount of the white of the egg in susceptible persons will produce anaphylaxis. This has been done experimentally many times but no one has yet been able to produce anaphylaxis experimentally from the yolk of the egg. Some children are anaphylactic at the same time both to egg and milk but are able to digest carnivorous food and chicken. There appears to be a family pre-disposition to this condition and several observers reported cases in which the mother and the children both have absolute intolerance towards eggs. In some children the symptoms develop immediately on the ingestion of even minute quantities of the white of eggs, but in other children it can be taken for several days or even months without any inconvenience when suddenly a small amount of egg will start the signs of anaphylaxis.

The mild symptoms of anaphylaxis are both cutaneous and digestive. The cutaneous forms are urticaria, prurigo, eczema or edema which appears suddenly and immediately after taking a minute quantity of egg. The facial edema, limited perhaps to one side of the face, is quite a frequent form. An involvement of both eyes or around the lips are the most frequent locations. This goes on very rapidly without any albumin in the urine and without any cardiac disturbances. The gastro intestinal symptoms are sudden vomiting, abdominal pain, and finally a diarrheal crisis. A very severe type of anaphylaxis which the authors call *la grande anaphylaxie* is more uncommon but may be so severe as to be fatal. This condition is one of shock with uncontrolled vomiting, abdominal pain, subnormal temperature, occasional convulsions, asthmaticiform dyspnea, and an intense urticarial eruption. A simpler form of anaphylaxis generally lasts a few hours, but may last two or three days. In the mild form the prognosis is benign and Richet showed that the ingestion of a large quantity of egg was necessary to prepare for this anaphylactic state. Richet in his experimental studies showed that from a number of animals fed on the same amount of albumin only a few became anaphylactic and these animals were those which could not digest the albumin and had intestinal symptoms. The injection of the albumin in the stomach and the intestine of a dog did not produce anaphylaxis, but he obtained the anaphylactic reaction when injected in the large intestine. Injecting it in the portal vein did not produce any symptoms.

They think that it is the resorption in the

blood of the heterogeneous albumin which produces the symptoms of anaphylaxis.

In the treatment the question of preventive is of the most importance. In children who have this idiosyncrasy, eggs and milk should be prohibited and the authors believe that no child should take more than one egg a day until they are five years of age and during the convalescence from the course of any gastrointestinal trouble, no egg of any kind should be prescribed.

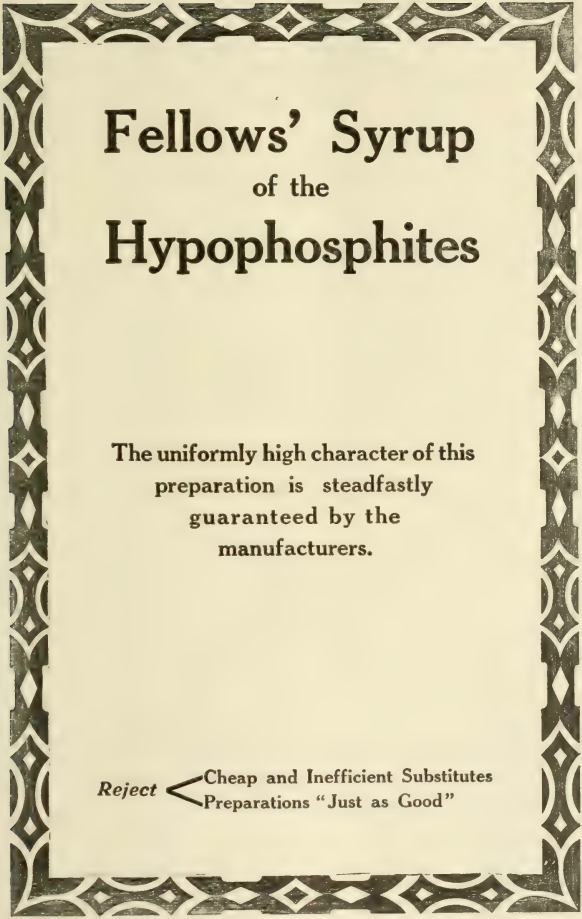
The treatment during the attack is to get rid of the albumin as soon as possible. Experiments by some authors in trying to sensitize the system to small quantities of albumin have met with some success. Schoffield gave 1-1000 of a grain of albumin for several weeks and gradually overcame the intolerance to eggs.

Treatment of Pyelitis.

In an acute attack of pyelitis, A. v. Lichtenburg introduces a catheter into the ureter up to the pelvis of the kidney and leaves it in place for 24 hours. Efficient drainage is thus established and the temperature will readily drop. Pus and bacteria will, however, continue to be present in the urine and the resulting chronic condition will require treatment. This is best accomplished by irrigation of the renal pelvis with collargol solution every 2 to 4 weeks until the urine is sterile. Recurrences can only be avoided by taking the mechanical conditions into consideration. If there is stagnation in the renal pelvis owing to ptosis of the kidney, it is evident that a fixation of this organ is necessary. The exact condition of the pelvis can always be determined by the Roentgen rays after the pelvis has been filled with collargol. In some cases of very long standing, with involvement of the renal tissues, a nephrotomy or even a nephrectomy will be required. In enterogenous colipyelitis, decapsulation of the organ will often prevent relapses since it will remove the paths by which the germs reach the kidneys.—Therap. Monatshefte.

Treatment of Vincent's Angina.

Achard and Desbouis report excellent results in the treatment of Vincent's angina with local applications of a mixture of 0.2 Gm. salvarsan in six to eight Cc. of glycerin. The preparation was applied three times daily and led to a prompt recovery. The method, which is simple and quite harmless, is to dip cotton in glycerin and then into the salvarsan powder. The cotton is then touched to the affected area. The authors point out that this procedure entails no risk and that if syphilitic infection is also present the drug does good service in



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combatting the local spirella and improving the syphilitic lesions whether primary, secondary or tertiary. A diagnosis between Vincent's angina and a local syphilitic lesion is often difficult, and in the former, mercurial treatment may do harm as in the case recently reported by Moller, in which gangrene set in. Salvarsan on the other hand will be of benefit in either case.—Bul. de l'Acad. de Med.

Treatment of Rickets.

A number of observers have come to the conclusion that rickets and osteomalacia are manifestations of one and the same disease the difference consisting in the fact that the former is a disease of childhood and the latter one of adult life. Babs and Neus have recently recommended pituitrin in the treatment of osteomalacia, and it has therefore occurred to Klotz to try extract of pituitary gland in rickets also. He started with the consideration of the fact that while thyroid gland contains a considerable quantity of iodine, suprarenal gland a considerable quantity of sulphur, and so on, pituitary gland contains a considerable quantity of phosphorus. The retention of phosphorus and calcium is increased in rickety children by medication with phosphorus cod liver oil. Phosphorus alone does not affect the storing up of calcium, but, on considering the composition of cod liver oil, it becomes probable that a fair proportion of the phosphorus exists in the form of nuclein phosphoric acid and glycerin phosphoric of nuclein and lecithin respectively. In order to gain a better insight into the action, he treated some of his cases with a lecithin extract of malt, which contains 2.5 per cent. of pure lecithin. Improvement not only in the general condition but also in the power of walking was recorded on taking this medication. This improvement was maintained only as long as the preparation was given, and the symptoms returned when it was stopped. In all, the experiments with pituitary extract and lecithin was limited to five cases. In four of the cases the children were able to stand after from seven to fourteen days after the treatment was started; they began to walk in seven, fourteen, twenty-one, and twenty-eight days respectively, and all could walk nearly alone within forty-two days. An improvement in respect to general condition was also recorded. The excellent results obtained in these few cases inclines the author to the view that in rickets one is dealing with disturbances of phosphorus and not calcium metabolism. He is of opinion that further investigations are required before the pharmacology of the pituitary gland can be regarded as in a satisfactory state.—Brit. Med. Jour.

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Treatment of Diphtheria.

Koehler praises the action of hydrogen peroxide applied locally in diphtheria but finds that most of the preparations on the market are either too weak or give up their oxygen too rapidly. He obtained much better results with perhydrol, which he states is a preparation of exceptional purity and contains 30 per cent. by weight of pure peroxide and liberates 100 times its volume of oxygen. The author uses the perhydrol in combination with glycerin since the latter delays the evolution of oxygen and by itself has a very favorable action upon the membranes in that it attracts water and thus favors a drying out of the pathological tissues. The following is the formula he generally employs for local application: Perhydrol, 3 Cc.; glycerin, 30 Cc. The results are no less satisfactory in follicular, lacunar and catarrhal angina. Where a gargle is desired in addition, he recommends the following formula: Perhydrol, 6 Cc.; aquae dest., 300 Cc. Sig.: One to two tablespoonfuls to one cup of boiled water. To be mixed shortly before use.—Klin. therap. Woch.

Treatment of Diabetes with Rectal Injections of Sugar.

Luthje finds that most individuals will very easily absorb one to two liters per day


SINKINA
SIN==without

KINA=quinine

**THE DAWN OF A NEW ERA
IN THE TREATMENT OF MALARIA**

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of a 5.4 per cent. glucose solution if given per rectum very slowly by the drop method. This corresponds to 50 to 100 Gm. of sugar which can be introduced into the system in this way. It was also found that in diabetes, sugar given in this way was much better utilized than if taken by mouth. At first it was believed that the sugar was simply fermented in the lower bowel and thus was not absorbed. In cases however, where the enema was not retained but was again voided after several hours, it was found that the percentage of the solution had not changed. Then also the beneficial effect which these injections exert upon acidosis makes an actual absorption highly probable. The direct proof could easily be obtained when the blood itself was analyzed; in all cases tested, the percentage of sugar in the blood serum was unmistakably increased. With experiments on dogs it could be demonstrated that sugar injected into the portal vein will give rise to a more pronounced glycosuria than sugar injected into the femoral vein. Sugar given per rectum is also absorbed by the blood without passing through the liver.—Therap. d. Gegenwart.

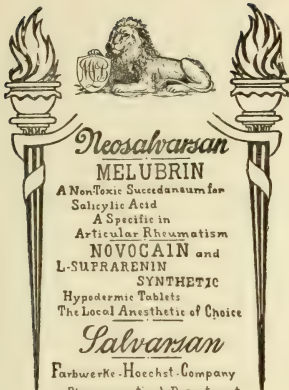
Great Tenacity of Life.

Turnbull notes that the case of the French Zouave who lived for some time after practically the whole of the head except the brain had been removed by a cannon ball is one of the classical instances of tenacity to life. Weinlechner in 1881 reported that a man had lived and been conscious for twelve hours after a fall and injuries which included fracture of the cervical spine, with laceration of the cord, paralysis (motor and sensory) of all the limbs, rupture of the sternum, bleeding into pericardial and abdominal cavities, and laceration of the spleen. Erichsen reported the case of a man who, after leaping a distance of 60 feet down a hoist, lived for ten days, although suffering from fracture of seven ribs, perforation of the apex of the right lung, tearing of the pericardium, complete fracture of the first lumbar vertebra, and pulverization of the right os calcis. D'Arcy Power read a paper in 1890, indicating that considerable laceration can take place in the spleen and in the kidney with very slight symptoms, unless a large blood vessel is implicated. If urgent hemorrhage does not immediately follow injury the most extreme internal injuries can often be undergone with a minimum manifestation of shock. The following case that came under the author's observation is cited to bear this statement out, and emphatically illustrates the powers of tenacity of life in the human frame: The case was that of a dock laborer

aged 45 years who was admitted to the hospital nine hours after he had fallen down the hold of a ship. This man walked half a mile after receiving a fractured skull, extensive fractures of the ribs, pulping of the spleen, pulping of the kidney, and lesions in the vicinity of the solar plexus. A bowlful of blood had probably been passed by the urethra from the ruptured kidney. The patient died one hour after admission to the hospital.—Brit: Med. Jour.

Non-Absorption of Drugs on Intramuscular Injection.

Editorially the British Medical Journal says that a radiographic curiosity of very great interest was recently described by Speder. In skiagrams of the hips of a patient the image of the bone was obscured by a number of abnormal and at first unaccountable shadows, arranged in radiating lines, their direction corresponding to the form of the muscular fibers. Normally, as we all know, the muscles give little or no radiographic image. The hypothesis of osteomata was eliminated by the localization and general form of the shadows, and pathological calcifications fail to give this appearance with the x-rays. There remained the hypothesis of a modification in the transparency of the tissues, owing to the introduction of foreign bodies, and this was confirmed by the history of the patient. He was aged thirty-nine years, and had suffered at various times from acute rheumatism, ultimately affecting the hips. In 1909 chronic arthritis of the coxofemoral articulations was diagnosed, but a radiograph made at the time, and again at the beginning of 1911, showed nothing abnormal beyond the osseous and articular lesions. More important evidence was, however, obtained. The patient, it was elicited, had contracted syphilis, and had received a large number of intramuscular injections of mercurial salts. Three series of injections were made from 1907 to 1911. In the latter year one medical man, connecting the lesions of the coxofemoral articulations with the syphilitic infection, submitted the patient to a series of intramuscular injections with a different solution, which was probably iodipin (that is, iodine combined with oil of sesame), and thirty such injections were made in the muscular masses at the hip. The skiagrams revealing the curious opacities just described were made twelve months after these injections, and as those made previous to the injections showed nothing abnormal, it seemed reasonable to attribute the appearance to the non-absorbed drug. It is well known that a number of preparations used in medicine, including the iodine group, are somewhat opaque to the x-rays, and all



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radiographers agree as to the persistence of shadows due to injections of iodoform paste in fistulous tracts and osseous cavities. But medicaments which might be expected to be easily absorbed usually disappear rapidly. Among patients submitted to a series of injections of mercury biniiodide, Speder sought in vain for any traces of the medicaments persisting after some days. In another patient iodipin was absorbed within nineteen days after injection. The state of the muscles, apparently, is of importance, and it was thought probable that in the patient who showed the strange opacities, a year after injection, there had occurred a fibrous proliferation, due to the many previous injections of mercurial salts in the muscular masses at the hip, thus rendering the muscle less capable of absorbing such a salt as iodipin. From the radiat-

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ing arrangement of the shadows, the opaque bodies appeared to be localized in the interfascicular cellular tissue.

The interest of the observation from the therapeutic point of view lies in the fact that the radiograph may indicate whether or not the absorption of the drug has taken place in a normal manner.

Correspondence.

Sir Berkeley Monynihan of Leeds, delivered the annual address at the eighty-first annual session of the British Medical Association at Brighton. He spoke for an hour with a delivery and diction which was perfect, plain and clear. Any one could understand him, yet he enunciated truths and wisdom without stint. He discussed the pathology of the living, possibilities of diagnosis in the living, chronic ulcer and carcinoma, reduction of the dread of operation, one of surgery's gifts to medicine, surgery and its revelations. He certainly dealt kindly with the surgery and surgeons of America. Commencing with the great boon of the discovery of the anesthetic

power of ether, (he does not use chloroform) the speaker went on to compliment in the highest terms, among others, the following American surgeons: Senn, Murphy, Crile, and all the Mayo clinic. He dwelt much on those surgeons who attacked their patients with canine ferocity and much preferred that surgeon who had the heart of a lion yet the hand of a lady, not the one who had the claws of a lion and the heart of a sheep.

Those who have known and consequently loved Sir Berkeley were not surprised at his rising to any height. Those who listened to him for the first time were simply held by both his oratory and his personality. Sir Berkeley Monynihan is certainly a gift from the Gods to surgery. E. S. M.

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Manifestations of a Healthy Heart.—

Thorne (British Medical Journal) says that as regards the etiology of these cases, careful investigation, especially when it can be carried back to the early stage of life, lights on some form of autotoxis. The most common is that of gastrointestinal origin. In other subjects a rheumatic or gouty taint seems to bear a causative relation to the syndrome. Not a few subjects bear the rachitic stamp in the form of beaded ribs, retraction of the lower part of the sternum, or a tendency to pigeon breast. But whatever the cause the result is a general impairment of power and efficiency, and a consequently diminished ability to bear strain, whether mental or physical. Such are the children and adolescents who become the subjects of the strain usually attributed to athleticism. Sound and healthy lads do not strain their hearts in ordinary and legitimate forms of game and sport, but those under consideration, short of wind, subject to palpitation and tumultuous action on exertion, and lacking in staying power, albeit full of pluck and will-energy, may meet misfortune in a football match, a paperchase, a boat-race, or a game of rackets (Thorne quotes cases within his knowledge). Even if they escape some form of breakdown, they plod on with something less than normal energy which may suffice to meet the requirements of a routine life; but they live on a lower plane is their due. In manhood some are invalidated because they are unable to bear the strain of an active life at home or abroad, especially under the influence of a subtropic and humid climate. Others fail in route marching or break down in maneuvers, having persisted in opposition to their instincts and judgment, under the influence of assurances that there is nothing organically wrong with them, and that their monitory symptoms and their misgivings are "all nerves." As they enter on or pass beyond middle life, the atrophied tunica media and the weakened myocardium being unable to accomplish the treble task of emptying the chambers of the heart, filling the aorta, and then driving the blood through the peripheral vessels, these subjects begin to experience the troubles and disabilities generally referred to as indicative of arteriosclerosis, but, as Thorne would prefer to call it, atrophic dilatation as opposed to the hypertrophy to which the late Dr. Savill gave the name of "arterial hypermyotrophy."

The treatment to be adopted consists primarily in the correction of autotoxis, whether gastrointestinal, rheumatic, gouty, or due to some pyogenic process. The greatest attention should be paid to diet

and general hygiene, exercise being regulated in accordance with the response which may be expected from the circulatory mechanism. Baths and exercises administered according to the Schott-Nauheim method are of great value. Among pharmaceutical remedies, iron is not indicated; digitalis is sometimes useful, but adrenalin, administered by the mouth in doses of from 5 to 10 minims of the hydrochloride solution, stands pre-eminent. Its special office is to bring the tunica media into action, and, it would seem, to restore it to functional efficiency. Thorne has employed it for years, and in every case made frequent manometric observations, which enable him to give unqualified denial to the prevailing suspicion that, thus administered, it raises blood pressure.

It is necessary to add that, during the period of growth and development, progress in the more marked cases is generally slow, and relapse the not uncommon penalty of undue and especially of sustained exertion.

Such in brief are the reasons why he regards it as a misfortune were it accepted that functional murmurs and irregularities of pulse frequency are manifestations of a healthy heart, and as such to be regarded with complacent acquiescence.

Pulmonary Tuberculosis.

The author produces evidence distinctly in favor of the use of tuberculin in connection with sanatorium treatment. With early cases (61 in number), the 50 per cent. of cases treated without tuberculin who lost their tubercle bacilli was increased to 66.6 per cent. upon the addition of tuberculin. With the moderately advanced cases (157), the 16.8 per cent. treated without tuberculin who lost their tubercle bacilli was increased to 33.8 per cent. by the addition of tuberculin. With the very advanced cases (67) there was no difference between the tuberculin-treated and non-tuberculin-treated cases. Now and then a case of very advanced disease would lose its bacilli, but for the most part alleviation of symptoms and some prolongation of life was all that could be looked for in the way of improvement.

The addition of tuberculin to sanatorium treatment thus increases the chances of clearing the sputum of tubercle bacilli by some 16.6 per cent. in the case of patients suffering from early disease, and by some 17 per cent. in the case of patients suffering from the disease in its moderately advanced stages. This is a material gain, the significance of which is emphasized by the excellent after-history records of the patients who lost their bacilli as the result of treatment.—Bardswell, in The London Lancet.

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The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.



The Main Building Front View.



Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test.

— After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the surface of the slide. After they have dried, the

allowed to dry without being spread out on the surface of the slide. After they have dried, the

slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

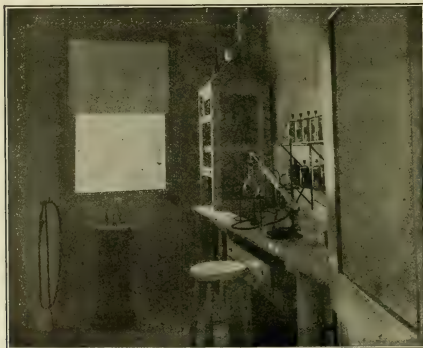
Second Method.—

Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count, etc., should be sent to the laboratory on glass slides. As thin a smear as possible should be made.

Smears For The Detection of Gonococci.—

One drop of purulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made over the surface of the slide.

In collecting a specimen from a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and the material from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in the bottom of the jar before



Clinical Laboratory, Showing Arrangement of Desks, Microscopes, Microtomes, Incubator, Centrifuge, Etc

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlich's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—

the tumor dropped in **Feces.**—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

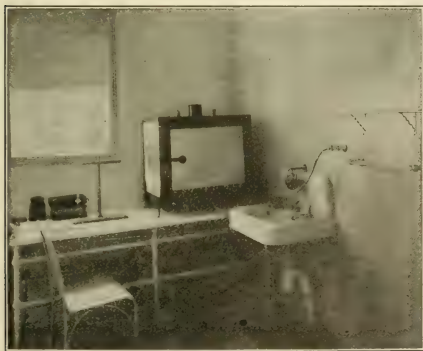
Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis, the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.



(Clinical Laboratory, Showing Supplies, Working Table, Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourniquet applied, taken the blood from the vein by means of the syringe



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

to coagulate, cork, pack and mail as any other fragile package. At least two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk. The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents. should be sent in a sterilized bottle. A large vaseline or quinine bottle usually answers the purpose.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourniquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohol lamp, or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tube, allow



Fig I.



Fig II.

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As a rule, the more efficient the cathartic, the greater the discomfort to the user. The griping and nausea following the older cathartic pills and fluid preparations, are well known and used no one to bring the

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Functional Disturbances of the Liver.

When one stops to think of the work the liver is called upon to do in the human economy and the excessive burden so frequently placed upon it by errors of diet, faulty methods of living, etc., it is really surprising that this great organ—the largest gland of the body—does not become deranged more often than it does.

Clinical study has shown, however, that the liver is much more subject to functional disturbance than is generally realized. The opinion has been growing for sometime therefore, that not a few obscure conditions of the intestines, particularly those grouped under the term "auto-intoxication," should be attributed to sluggishness or torpidity of the liver processes.

In view of this there is an increasing demand for a cholagogue that can be relied upon to stimulate the functional activity of the liver without at the same time producing a degree of catharsis that is neither necessary nor desired. Many and various are the drugs that have been tested with this in view, but practically the only one that has met the situation is that long known and widely used preparation of *Chionanthus Virginica*, Chionia.

This product is exceedingly effective as a stimulator of hepatic processes, and administered in proper dosage it is not only an effective cholagogue, but what is especially important, it can be relied upon to

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produce its effects without causing undue activity of the bowels. The prompt influence of Chionia on hepatic functions consequently gives it a broad range of usefulness, not only in overcoming liver disorders themselves, but also the various affections that are dependent on hepatic deficiency or derangement. It is indicated in acute and chronic hepatitis, catarrhal jaundice or cholangitis, biliousness, chronic intestinal catarrh, intestinal putrefaction, auto-intoxication and all maladies caused or aggravated by derangement of the liver.

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A feature that has contributed to make Cord. Ext. ol. Morrhuæ Comp. (Hagee) so widely popular, is the ease with which it is tolerated during the hottest kind of weather. This is a marked advantage and one well worthy the physician's consideration, for the need for a tissue food such as Cord. Ext. ol. Morrhuæ Comp. (Hagee) may be just as pressing in an individual case in summer months as during the coldest weather.

By the same token this product is especially well adapted to the needs of those with a delicate gastric apparatus.

Stockel, of Germany investigated sacral anesthesia for the amelioration of labor pains. His plan was to inject solutions of novocain varying in strength from 1.5 to 3 per cent. and in quantity from 3 cc. to 8.3 cc. To this was added a little suprarenin. He employed this method in 141 cases of labor and reported unquestionably favorable results in 111. The sacral pains were especially reduced. Bryan, in *Journal Tennessee State Medical Assn.* Oct. 1912,

"Bier uses local anesthesia if possible with novocain, one half per cent. He does not often use spinal anesthesia, being so well satisfied with local. I witnessed the removal of a kidney under local anesthesia." W. J. Mayo, in *Journal Lancet*, Aug. 15, 1912.

In preliminary ligation for exophthalmic goitre, by C. A. McWilliams, "the right superior thyroid vessels were tied on Aug. 5, 1908, using local anesthesia with a 1-8 per cent. solution of novocain, combined

with adrenalin, and without the preliminary use of morphine. No symptoms resulted from this procedure, nor was there any improvement in her condition, as was to be expected. Accordingly, 10 days later, the left superior thyroid vessels were similarly ligated, under the same local anesthetic. She immediately began to improve, mentally and physically, and in 7 weeks had gained 16 lbs. *Proceedings of New York Surgical Society*, May 8, 1912.

The Successful Treatment of Gotter.

Recent study of the thyroid gland has demonstrated beyond all doubt that it is peculiarly subject to the altero-corrective action of iodine. Owing to the metabolic conditions present in these cases drug absorption is often retarded. Consequently in choosing an iodine preparation it is important to select one that is not only therapeutically active but one that can be administered continuously for a protracted period without giving rise to gastric disturbance.

Many and various are the iodine preparations—organic as well as inorganic—that have been used, but none has ever proven so uniformly effective as Burnham's Soluble Iodine. This dependable product can be given internally, cataphorically or hypodermically. The glandular hypertrophy is promptly reduced and the nervous and metabolic symptoms are quickly controlled. Unlike other iodine preparations, however, Burnham's Soluble Iodine does not derange the digestion nor disturb the nutrition.

To accomplish most satisfactory results, Burnham's Soluble Iodine should be given 5 to 20 minims in a half glass of water three times a day before meals. If it is desired to use this remedy hypodermically inject 5 to 20 minims diluted with 15 to 40 minims of distilled water once daily.

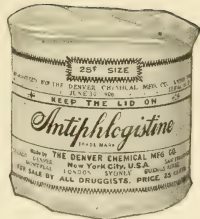
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Calcium Combined With Creosote.

Creosote has been justly thought to be nearly a specific in respiratory diseases and calcium is coming into view as a close second, while together a recent writer in a medical review states he finds the valuable effects of both are enhanced. This is interesting from the fact that this combination is found in perfect form in Budwell's emulsion of cod liver oil (Budwell's) Budwell Pharmacal Co., Manufacturers, Lynchburg, Va. where in a perfect and permanent, as well as palatable, emulsion with cod liver oil and its nutritive values,

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we will find not only the above combination, but those of other iodides, and guaiacol as well. We call attention to the open formulæ in their advertisement. This is not only an excellent preparation, but an ethical one also, being advertised to the profession only, never to the laity or consumer—which is more than can be said of many preparations.

Arnoux Sign in Twin pregnancy.

Lorier says that in the diagnosis of twin pregnancy the stethoscopic signs are the most important. The hearing of two nonsynchronous hearts with beats of different rate is a certain sign, but this needs a second observer. The author mentions a new sign of value, consisting in the perception by the same observer at the same point of two hearts, not always synchronous so that the sound is at intervals like that of two horses trotting together, the feet being alternately synchronous and non-synchronous, giving gallop rhythm. Production of this sign requires proximity of the two hearts, or the overlapping of their zones of propagation. It is necessary to explore systematically with a stethoscope all the accessible surface of the uterus, especially the zone between the two points of heart sounds. The author states this sign is found in one out of every three cases of twin pregnancy.—*Australian Medical Gazette.*

Plague Banners.

Crawford states that the custom of carrying sacred pictures in penitential processions, in times of pestilence, is one of some antiquity. If one may trust the tradition of the Church, which Jacobus de Voragine, Archbishop of Genoa, embodied in his *Legenda Aurea* at the end of the thirteenth century, it is at least as old as the time of Gregory the Great. Writing of that fierce outbreak of bubonic plague in Rome in 590 A.D., in which the pandemic of fifty years' duration discharged all its expiring virulence, the Archbishop says: "And because the mortality ceased not, he ordained a procession, in which he did do bear an image of our Lady, which, as is said, S. Luke the Evangelist made, which was a good painter, he had carved and painted it after the likeness of the glorious Virgin Mary. And anon the mortality ceased, and the air became pure and clear, and about the image was heard a voice of angels that sung the anthem, 'Regina Coeli.' At the same time S. Gregory saw an angel upon a castle, which made clean a sword all bloody, and put it into the sheath, and thereby S. Gregory understood that the pestilence of this mortality was passed, and after that it was

called the Castle Angel (Castel S. Angelo)." The plague banners, or gonfaloni of Perugia, serve to show a lineage far older than the epoch of the Perugian School of Painting, and one that extends also beyond the boundaries of Umbria. It is only in a limited sense that they can be regarded as exclusive products of the Umbrian School, and particularly of its Perugian branch. Indeed, the two most famous had actually a Tuscan provenance. It so happened that the most fertile period of Perugian painting, in the latter half of the fifteenth century, coincided with the devastation of Perugia by a succession of epidemics of plague; and at each fresh outburst the painters of Perugia were called upon to produce these tributes of popular devotion. Before these suppliant banners marched the priesthood in their robes, behind them followed a penitent people, striking their breasts and wailing aloud "Misericordia." The remedy was well adapted to their sufferings, for these processions of penitents traversing the city and following banners that displayed the figure of the Redeemer, or the Madonna, or some plague saint, produced in their souls such a degree of spiritual exaltation as made despondency impossible. Men gazed on them as they gazed on the Brazen Serpent that Moses set up in the wilderness to stay the pestilence. The greatest of all the plague banners was destined to be also the last; Raphael's Sistine Madonna, in which the Madonna and Child are attended by S. Sixtus and S. Barbara, was painted during an epidemic of plague for the Black Friars of S. Sisto at Piacenza. No record exists that it was ever actually used for the purpose for which it was painted. Bonfigli, in the spirit of Phidias, had painted Mary—the Queen of Heaven. Raphael, in the spirit of Praxiteles, had painted Mary the Mother of God. The people wanted a queen, and Raphael gave them a peasant woman. They could not see, as Raphael saw, in womanhood the embodiment of gentleness spiritualizing the brute in man. They could not see in motherhood the vision of willing suffering transfigured to joy. It was this reunion of Art with Nature that dethroned the plague banner.—*Proceedings of the Royal Society of Medicine.*

Gunshot Wound of Shoulder.

Dr. Fernando F. Barcena, Mexico City, Mexico, states: A soldier was shot while in action in front of my office, February 13th, 1913; the ball being a soft nose mouser—the force of which was partly spent—made a large ugly wound in the shoulder, and fractured the scapula. The wound bled freely from small blood vessels, and the patient was in an alarming condition from



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loss of blood when I reached him. He was carried into my office where I made some Glyco-Thymoline quite hot and syringed the wound with it; this stopped the hemorrhage promptly after which I dressed the wound once daily with Glyco-Thymoline full strength, for two weeks, when I dismissed the case cured.

During the entire treatment there was not one drop of pus formed which indicated to me that Glyco-Thymoline is an absolute antiseptic.

Hay fever, both acute and chronic, is being successfully combated with Respiration. Those of the profession not familiar with the article may obtain a free sample by writing to The Tilden Company, New Lebanon, N. Y., or St. Louis, Mo. This is one of the very reliable prescriptions in hay fever and asthma and has rendered valuable service.

Traumatic Rupture of the Duodenum.

This injury is liable to occur when a blunt force is applied to the upper part of the abdomen. In the majority of recorded cases the force has been the wheel of a vehicle passing over the body. This accident has been encountered much more frequently of late years, this increase being coincident with the advent of motor traffic. The rupture is usually situated in the third part of the duodenum, this portion being nipped against the vertebral column. Owing to its anatomical relationships a rupture of the duodenum at this point may, and frequently does, occur into the extra-peritoneal tissues in the first place, and the symptoms thus produced are often vague and misleading. Even when the abdomen has been opened the lesion may not be apparent, a fact brought out by Ropke, who found that in six cases out of 18 operated on, the rupture was not detected at the time of operation. When there has been a coincident rupture of the liver with hemorrhage into the peritoneal cavity the duodenal injury is very apt to be overlooked, and should therefore always be suspected and searched for.

In cases where the meso-colon and the root of the mesentery are also torn, free gas, blood, and duodenal contents will be found in the peritoneal cavity, and the diagnosis and recognition of the injury is much simpler. Strangely enough the pancreas usually escapes injury, and fat necrosis is practically never met with in these cases. As the force producing the injury is a crushing one, the wound in the duodenum is frequently ragged, bruised and devitalized. In a few cases, where there has been a small rupture limited to a fraction of the circumference of the bowel, suture alone

has sufficed, but in the majority resection is indicated. In the latter case the best operation is probably to free and freshen the proximal end, to free and pull the distal end of the duodenum out to the left, below the vessels, round the duodeno-jejunal flexure. This end is then closed by invagination, a posterior gastro-jejunostomy performed, and the operation completed by an end-to-side implantation of the proximal duodenal stump into the jejunum as near as possible to the gastro-enterostomy. Ropke strongly recommends, in addition, the establishment of a cæcostomy, for the object of introducing fluid and nourishment, it being very desirable to give nothing by the mouth for four or five days after the operation.—Edinburgh Medical Journal.

Lateral Cervical Fistula.

As the result of extensive researches on the development of the neck, Wengowski has come to the conclusion that cervical fistulae opening below the level of the lower border of the hyoid bone have nothing to do with the cervical sinus. The latter is formed through the approximation of the lateral borders of the neck, the thorax, and the lower border of the third branchial arch, and not the second, as Ellis and others have maintained. In the embryo the branchial apparatus lies not from above downwards, but from before backwards, and the lower border of the whole apparatus is on a level corresponding to the lower border of the hyoid bone in the adult. At the beginning of the second month the branchial apparatus as such disappears; thereafter only small remnants of stratified epithelium and sometimes cartilage remain, and these are always found above and dorsal to the hyoid bone.

The thymus is formed from the third branchial cleft in the form of a long canal extending from the lateral wall of the pharynx obliquely downwards to the sternum, where definite thymic substance begins to develop. The thymic duct usually disappears completely; in exceptional cases it persists in toto or in isolated portions. The lower portions are those which most frequently persist, and such thymic duct remnants develop into lateral cervical cysts or fistulae. The anatomical position of lateral fistulae coincides exactly with that of the thymic duct. The course of the latter in the neck is bow-shaped, the apex of the bend being situated just below the mid-point of the posterior belly of the digastric; from here the upper part is directed obliquely upwards and inwards, whilst the lower part turns towards the anterior border of the sternomastoid, which it follows downwards.

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Lateral cervical fistulæ usually open at some point along the anterior border of the sternomastoid muscle, and when they extend far upwards they are usually found to curve inwards below the stylopharyngeus muscle, which is derived from the third branchial arch, both of which facts point to the thymic duct being the origin of such fistulæ.

On microscopic examination the wall of a lateral fistula is seen to be lined by stratified and occasionally by ciliated epithelium, and not infrequently nodules of lymphoid tissue are visible in its wall, a fact which speaks strongly for its thymic origin. Hammar found in a sheep-embryo bilateral cervical fistulæ opening to the exterior. Both fistulæ communicated with the pharynx,

and were lined with stratified epithelium; on the right side the fistula passed directly into the substance of the thymus.

Taking these facts together Wenglowski is convinced that practically all lateral cervical fistulæ opening in the lower half of the neck represent persistent portions of the thymic duct which have ruptured on to the surface either before or shortly after birth.—Edinburgh Medical Journal.

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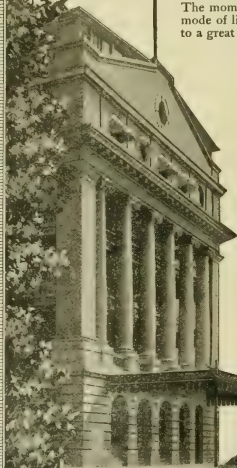
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SOUTHERN MEDICAL SOCIETIES



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Annual Meeting at New Orleans, La.
October, 1913.

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705 S. Third St., Louisville, Ky.

Albert E. Sterne, M. D., Pres., Indianapolis.

SOUTHERN SURGICAL and GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Old Point Comfort, Va.
December, 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.
Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Mobile, Ala. April
16th, 1913.

J. N. Baker, M. D., Sec., Montgomery Ala.
H. T. Inge, M. D., Pres, Mobile, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.
W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Miami, Florida,
May, 14, 1913.

J. D. Fernandez, M. D., Sec.,
Jacksonville, Fla.

Jno. S. Helms, M. D., Pres.
Tampa, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Savannah, Ga.,
April 16-18, 1913.

W. C. Lyle, M. D., Sec. Augusta, Ga.
W. W. Pilcher, M. D., Pres.,
Warrenton, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Baton Rouge, La. 1913.

Joseph D. Martin, M. D., Sec.,
141 Elk Place, New Orleans, La.
B. A. Ledbetter, M. D., Pres. New
Orleans La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Vicksburg, Miss., 1913.
Date not yet decided.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

S. W. Glass, M. D., Pres., Dublin, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

L. S. Peters, M. D. Pres. Silver, City N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at (Not yet decided), 1913.
Edgar A. Hines, M. D., Sec.,

Seneca, S. C.

Chas M. Rees, M. D., Pres.,
Charleston, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Nashville, Tenn.,
April 8-10, 1913.

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O. Dulaney, M. D., Pres., Dyersburg, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Lynchburg, Va.
Oct, 1914.

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VOLUME 68
NUMBER 3

Charlotte, N. C., September, 1913.

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Table of Contents, Page 207

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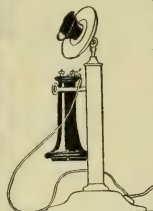
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Medical Society of the State of North Carolina meets in Raleigh, June, 16, 1914.

The Tri-State Medical Association of the Carolinas and Virginia (only members of State Societies eligible). Next Annual Meeting: Wilmington, N. C. Date of meeting February 1914, President, Southgate Leigh, M. D. Norfolk, Va., Secretary Treasurer, Dr. Rolphe Hughes, Laurens, S. C.

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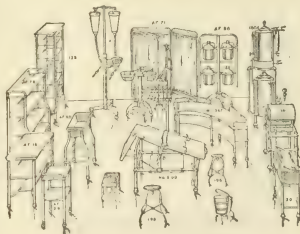
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Cystogen	gr. V.						
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The Charlotte Medical Journal

Vol. LXVIII

CHARLOTTE, N. C., SEPTEMBER, 1913.

No. 3.

Personal Observations of Prof. Ehrlich's Work and Laboratory.

By A. J. Crowell, M.D., Professor of Genito-Urinary Diseases in the North Carolina Medical College, and Genito-Urinary Surgeon to the Charlotte Sanatorium, Charlotte, N. C.

About seven years ago, shortly after the discovery of the spirochaeta pallida by Hoffman and Schaudinn, I had the pleasure of attending Prof. Finger's clinic in Vienna and saw the results of his experimental work on monkeys with this newly discovered micro-organism. At that time the world was anxiously awaiting the announcement of the results of his and other investigators confirming or repudiating the claim made by these men, that is, that it was the etiological factor of syphilis.

This is no longer a debatable question. Today the scene of action is transferred to Frankfurt, Germany, and the eyes of the world are upon Prof. Ehrlich, who has discovered not only a remedy which has made it possible to cure syphilis with one or two doses of medicine but in studying its action has blazed the way for a most wonderful work in chemo-therapy.

On our recent Travel Study Tour through Europe, we had the pleasure of visiting his laboratory and hearing from his own lips and seeing with our own eyes something of the work he has done and is doing.

On entering the laboratory building, we were received by him with a few words of welcome and then shown the results of his experiments as recorded on charts and demonstrated in animals, explaining in detail every step of the work. On our departure our sense of gratitude and appreciation could not be more appropriately expressed than in the words of Dr. Percy, of Galesburg, Ill., who thanked him in the following words: Your Excellency, Prof. Ehrlich: It is with a profound feeling of gratitude that this Travel Study Club of American physicians is privileged to visit the laboratory and to stand in the presence of a man, who has made physiological chemistry a new science and the relief of human suffering a greater fact. Your name is known in our own beloved country as one of the greatest benefactors of the race. It is also on the lips and in the brain of every scientist wherever the feet of civilized men are treading the earth. We appreciate more than mere words can express your interrupting your vacation and coming here in order to personally conduct us through your

laboratory. We are inexpressibly gratified to be the first to be told of yet greater things which you are doing and also have in contemplation whereby the physicians of the world will be further enabled to rob disease of its terrors, not only in man but in animals. It will be one of the most delightful remembrances of our visit on this side of the water that we have seen your face and heard your voice in your own work shop explaining to us with so much courtesy and conciseness the marvelous methods by which you have made this spot the pride of your nation, the glory of science, and the present mecca of the world; again we thank you.

We, indeed, felt that we had not only stood in the presence of a great benefactor but had seen something of the work of a master mind.

I was especially glad since he answered a question I had been asking for quite a time, without a satisfactory answer, which is: Why is it necessary to give mercury with salvarsan in the treatment of syphilis? At first it was thought combined treatment was unnecessary but later investigations showed the action of "606" somewhat different from what was first supposed and that its bactericidal action could be greatly facilitated by the use of mercury. The basis upon which the whole theory is founded is that parasites are only killed by those drugs for which they have an affinity, by means of which they are fixed by them. These drugs are termed parasitotropic. There are exceptions to this rule. We are all familiar with the clinical therapeutic effects of iodide of potassium in the treatment of tertiary syphilis. It dissolves the infiltrated cells but the parasites are not attacked. To develop chemo-therapy, we would not build on exceptions but the rule and select such substances as destroy the parasites by fixation. At first the theory was that "606" destroyed the spirochaete by direct action but further investigation shows it to be indirect as well, in that it fixes the remedy and excites the organisms to the formation of specific anti-substances. This view is based upon the fact that a solution of salvarsan may be added to a tube which contains the micro-organism without either destroying them or diminishing their motility. The effect of the drug is shown, however, in the following experiment: First, suspend spirochaete in in-different mixtures of serum which do not

injure their vitality and fill two small tubes therewith and add to one of these a very small quantity of salvarsan, centrifugalize and we have in both tubes a deposit of spirochaete which show the same properties microscopically, *i.e.*, spirochaeta equally numerous and motile from each tube. If, however, these are injected into test mice, the one treated with salvarsan will not infect the animal while those from the control tube will. This shows that the salvarsan is absorbed by the spirochaete and has damaged them sufficiently to prevent their increase in the human body. In this way the direct effect by fixation of salvarsan is proved and the objection of the indirect effect based upon anti-substances falls to the ground. In other words, we have the direct effect but in a different manner from what was first supposed. It was only after long continued efforts that a clear conception of its action was obtained. Prof. Ehrlich found in his studies on trypanosomiasis, and especially the investigations of drug fast strains of germs, that it was possible to render them immune against certain remedies. This is true in three classes of different remedies, namely; 1st. The arsenic compounds. 2nd. The azo-dyes. 3rd. Certain basic triphenylmethane dyes.

He found that when a race of trypanosomes had been rendered immune against all the allies of fuchsin that race was immune against all the allies of fuchsin and methyl violet but not against the other two classes of dyes.

Also a race immune against arsenic compounds was not immune against the other two classes. This proves that the immunity is of a specific nature since it is limited to a definite class of substances and shows it to be a purely chemical process.

The phenomenon observed in connection with the drug fast strain of germs can be explained by the fact that their chemo-receptors suffer, under the influence of drug fastness, their affinity for certain groupings connected with the remedy being diminished,—(a purely chemical action). This explains why continually increasing quantities of arsenic compounds are necessary for the destruction of a race of arsenic-fast trypanosomes, a very vital point to be kept in mind in the treatment of syphilis.

Prof. Ehrlich has thus demonstrated that in the parasites there are different specific chemo-receptors which conditions the fixation of salvarsan and many other drugs. *A complete knowledge of all the chemo-receptors of a given parasite is the basis upon which rests the success of chemo-therapy and which is gradually and surely being marked out. The larger the number of different chemo-*

receptors, therefore, which can be demonstrated the greater is the possibility of a successful chemo-therapy.

To apply specific remedies, it is necessary to select one chemically allied to one of the chemo-receptors of the parasite; one which not only fixes it but will destroy it, a drug that is not only haptophoric (fixes) but toxaphoric (destroys) as well. To quote Prof. Ehrlich "the fixing group of the drug which anchors itself to the chemo-receptor of the parasite corresponds to the point of the arrow, the binding member is the shaft, and the poison group is the arrow poison fixed to the shaft of the arrow." The benzol group is the binding group in salvarsan, the orthoamidophenol group is the fixing, and the arsenic group, the toxaphoric. "The toxaphoric group of synthetic drugs poison the protoplasm of the bacterial cell when the chemical affinity exists between the toxaphoric grouping and the cell constituent."

To poison, then, a spirochaete with salvarsan, at least two chemical fixations occur: First, the orthoamidophenol group which fixes the salvarsan, and, second, the trivalent arsenic group enters into chemical combination with the arseno receptor of the cell and exerts its toxic effect. The avidity of the arseno-receptors can only react if favoring factors come into action. The haptophoric group primarily brings the arsenic along to the cell and secondarily brings about its possibility of action.

It is not a difficult matter to destroy germs in a solution or room but the question of internal disinfection is a very difficult one, as the living parasites are within the infected organism. Such poison as would destroy the germs in solution may be powerful cell poisons or organotropic as well as parasitropic. It depends upon the relationship of the parasitotropic to the organotropic properties of a drug as to whether it can be used effectively as a remedy.

Bichloride of Hg. would be useless for such a purpose, though a parasitotropic remedy, yet so powerfully organotropic as to make it useless for such a purpose.

"Only such substances can be considered therapeutic agents of which a fraction of the *dosis tolerata* is sufficient to bring about therapeutic effects."

The organotropic effect of drugs, according to Prof. Ehrlich and Langley, is due to the fact that there are quite different chemo-receptors in the various cells of the body, just as found in the parasites. The fixation of a drug is dependent upon its haptophoric properties, and to be effective it must be toxaphoric as well. Prof. Ehrlich has demonstrated that the parasites possess a whole series of chemo-receptors different

from each other. Now, if we can discover a grouping which has no analogue in the organs of the body the possibility of constructing an ideal remedy is accomplished. A remedy provided with such a haptophoric group would be innocuous, as it is not fixed by the organs and strike the parasites with full intensity.

The theoretical and experimental work is easy, but the step from the laboratory to the bedside is difficult and dangerous; first, on account of the so called idiosyncrasies of men to certain drugs. This supersensitiveness does not occur in animals. Salvarsan is so constructed that a manifestation of a supersensitiveness to it is one of the rarest occurrences, owing to the fact that the protoplasmic cell receptors do not fix the drug but is fixed only by the cell receptors of the spirochaeta. The apparent idiosyncrasies following its administration in man is due to errors in its preparation and administration. Too large an addition of alkali injures the veins used for the injection, too small amount causes blood coagulation and leads to thrombosis, and lengthy shaking of the solution and standing in the air oxidizes the drug and makes it much more toxic—forms oxide of arsenic. 2nd. Certain constitutional diseases, such as Addison's disease and status lymphaticus, cause a suprasensitiveness to arsenic compounds. Here the resisting power is lowered as well as a supersensitiveness to the drug.

The seat and location of the disease may bring about a supersensitiveness excited by a local reaction. The rapid disintegration of a focus of parasites liberates toxins, which irritate the tissues and produces a hyperaemia and swelling. This is of no significance if the reaction center is in the skin but if located in the neighborhood of vital organs (brain) then this reaction may bring about changes serious to life, or even cause death.

I believe this fact calls for a thorough investigation of each patient coming under our care and the administration of iodide of potassium previous to giving salvarsan for the liberation of such central focuses very advisable. These facts make the treatment of syphilitics not only a difficult but responsible task.

To obtain what Prof. Ehrlich terms "therapia sterilis magna," or to free the body of parasites by means of one or at most two injections of a drug, it is necessary, of course, that the dose must be in proportion to the advance of the disease, since a definite number of parasites are destroyed by a definite dose of the remedy, the amount of the drug must be increased in proportion to the multiplicity of the para-

sites. These important facts call for the earliest treatment of syphilis possible, since it is not only far more possible to stamp out the disease with one or two doses of salvarsan but the danger of irreparable injury to life, or even the possibility of producing death in later stages by endotoxines. The great value of the dark field illuminator and serological aids in our diagnostic work is of greatest importance here. Early diagnosis is very important.

The causes which make it possible to sterilize the system of parasites are not only the drug administered but the action of the antibody produced by the cell under the influence of the drug. This is especially true of the protozoa.

This effect, however, may be minimized by the fact that all the parasites escaping the destructive action of the drug may also escape or withstand the bactericidal influence of the antibody and change it into a new variety which is serum proof and known as a relapsing group. This possibility depends largely upon the nature of the parasites. In relapsing fevers in human beings the number of relapsing crops are restricted to three or four. Other parasites may exist in a great number of strains. This is especially true of the trypanosomes, in particular, those of syphilis. Professor Ehrlich has been able to produce in mice eight entirely different forms of growths for any length of time. Such parasites offer very great difficulty in their treatment, since the auxiliary forces of the body fail to act and makes it quite necessary to destroy the parasites all at once by means of drugs. Their great power of adaptation make it possible for a single germ to cause a fresh outbreak of the disease.

The great drawback to a complete sterilization of the body by a single dose of medicine, or two or three, as for this, is due to the fact that there are in the body what is known as dead spaces or corners, one of which is the hollow situated between the spinal cord and the dura. This is filled with fluid almost entirely free from cells and albumen, the cerebro-spinal fluid. The cells by which this fluid is secreted are highly impervious to most of the constituents of the organism such as albumen, and permit only a limited quantity of substances with small molecules to pass through. The drugs with more complex molecules are like albumen, kept back and unable to exert their influence on the cerebro-spinal fluid. This makes it impossible to destroy parasites located here.

Another reason for the deficient sterilization is that among the large number of parasites there may be some unaffected by certain drugs, but Prof. Ehrlich does not

think this fact plays an important part in the course of fresh infection but quite important in connection with diseases characterized by innumerable relapsing crops,—such as is found in sleeping sickness and syphilis. This fact gives an intelligent reason for the use of mercury with salvarsan in the treatment of syphilis,—the only one I have ever heard given, and in the future my plan of treatment shall be upon this basis..

I believe this fact calls for a thorough investigation of each patient coming under our care. Here one of two things may occur,—first, it is possible for a drug proof stock to form by adoption, or in other words, becomes immune to the action of the drug. Second, the continual formation of relapsing crops can bring about a change in the chemo-receptors of the parasites and result either in an increased or a reduced power of resistance to the parasites. We should expect, however, that the relapsing crops should become much less sensitive to the action of the drug than the original stock. These few facts show how difficult it is to cure syphilis in the late stages. In fact I heard no less authority than Prof. Wassermann say at the International Congress in London that he doubted very much our ability to cure syphilis (up to the present) where it had existed for three years. Others thought it possible but only after a long series of injections,—the so-called serial treatment.

Efforts have been made to render the epithelium more pervious to therapeutics by means of certain chemicals, allowing more of the therapeutic agent to get into the cerebro spinal fluid. This has proven unsuccessful. Direct injections of the remedy into the cerebro spinal fluid have been tried but Prof. Ehrlich thinks more favorably of the plan now being tested out by Drs. Swift and Ellis of Rockefeller Institute. They first give the salvarsan and draw off shortly thereafter blood and inject considerable quantities of serum, obtained from this, into the spinal canal. This obviates the possible ill effects of the drug on the sensitive central nervous system and at the same time possible to apply the curative in sufficient quantities.

I called on Dr. Ellis on my return to New York and found that they were very much encouraged with the results obtained from this plan of treatment in all cases where the spinal fluid was infected as shown by the cell count, globulin determination, and Wassermann reaction. In the early stages, before the secondary manifestations, these are usually negative, but if untreated soon become positive. The blood may become negative after treatment and the spinal fluid

remain positive because of our inability to sterilize the spinal fluid. This fact led to the above mentioned work of Drs. Swift and Ellis. I believe it is impossible to cure syphilis after it has affected the spinal cord without some such plan as has been suggested and tried out by these men, and their results are such as to justify us in following this plan of combined treatment in late secondary and tertiary syphilis in the future and believe with these men it will prove beneficial in the early stages of tabes. The procedure is not such a difficult one, but one to be carried out with a great deal of precision and persisted in until both the blood and spinal fluid become negative and remain so. The serum treatment should be given every two weeks, and it will be necessary for the patient to remain in the hospital at least two days for each treatment. Details of this work can be found in the August number of the Journal of Experimental Medicine.

Combined therapy is best carried out with therapeutic agents which attack entirely different chemo receptors in the parasites and do not have an affinity for the organism cell receptors. In this way a simultaneous attack is made on the parasites.

The value of such combinations is very obvious since a cure may be effected with the smallest possible doses and eliminate the danger resulting from a maximum dose of one of the ingredients. By combined attack the danger of rendering the parasites immune to arsenic is minimized. We have all seen cases of malaria, treated with quinine for a long time, become quinine proof so that therapeutical doses of quinine would no longer destroy the parasites but can readily be cured with arsenic. They are quinine but not arsenic proof. Here the combination of the two remedies is very advisable, and I believe intelligent combined treatment is the treatment of the future and that it will be more far-reaching in the very near future than has yet been dreamed of.

The master mind of Prof. Ehrlich has laid the foundation upon which may be built therapeutic agents, may we not hope,—that will rob typhoid fever, pellagra, pneumonia, tuberculosis, yellow fever, small pox, scarlatina, and many other maladies to which man is heir, of their horror.

711-715 Realty Bldg.

The Use of Quinine as a Means of Emptying the Womb.

By Edward Anderson, M.D., Rockville, Md.

In its issue of August 31st, 1912, The Journal of the American Medical Association contained an article by Dr. Thomas J.

Watkins, of Chicago, entitled *Puerperal Infection*, which brought about a lengthy discussion, the speakers differing widely in their views as to what ought and what ought not to be done. Some advocated removing the contents of the womb with the finger, some recommended ergot, one suggested washing out the womb and others went so far as to say that the retained matters should not be interfered with, but all opposed the use of the curette. Ergot will sometimes bring on an abortion by causing the uterus to contract and thereby separating the placenta from its walls, the products of conception not passing until after the effects of the ergot have worn off, being altogether unreliable. Until within the last five years I always cleaned out the uterus with the forefinger of the right hand and in infected cases followed this by washing out the womb through a double barrel catheter. Since that time I have depended entirely upon quinine, no matter whether the contents of the womb are fresh or purulent. Quinine, as I give it, will force the womb to disgorge at any stage of gestation. I give six grains of quinine on first being called to the case and three grains every hour thereafter until the uterus is completely evacuated. This plan of treatment has never failed, and I think it is much more desirable than that by mechanical means as it saves the doctor and patient much annoyance besides always doing away with the necessity of an anesthetic, which is sometimes necessary when force is employed.

Some Difficulties and Dangers in the Operative Treatment of Fractures.*

By Joseph Graham, M.D., Surgeon to Watts Hospital, Durham, N. C.

The operative treatment of fractures has gradually improved in technique and method until it has become one of the most satisfactory procedures in surgery. It is claimed by Lane that operative treatment offers certain definite advantages over non-operative treatment. "Some of the advantages claimed by Lane are that operation, at once, relieves the patient of pain from movement of the fragments upon one another; the duration of the period of disability is greatly shortened, as union is practically by first intention; operation restores the part to the condition the bones and muscles occupied before injury; function is more fully restored than by any other method."

The greatest advantage of operative treatment is the saving of useful limbs,—true

conservatism. Many badly mangled limbs can be saved. So long as the blood supply is sufficient to keep alive the peripheral parts, there is a chance. Far too many limbs are needlessly amputated. It is better that such a patient spend months in a hospital, if necessary, and walk out able to make a living, than to be discharged after a few weeks, with the loss of a limb.

Ununited fractures, and cases of angular and visceous union, can frequently be corrected by operation, and function fully restored. The restoration of function in some of these neglected cases is wonderful.

There has been so much written on the open treatment of fractures, and the technique has been so greatly improved, that I am afraid we are too sanguine as to results, and too radical in practice. The first consideration in the treatment of a fracture is restoration of function, and the first step in accomplishing this objective is complete reduction and permanent retention of the fragments. If reduction and retention can be accomplished, function will be restored and there will be no necessity for operating. Although improper reduction is one of the chief causes of loss of function, injury of the surrounding soft parts and adhesions of muscles, tendons, and fascia and nerves, is most important. When open treatment is employed there is considerable injury, and adhesions will develop in proportion to the mechanical skill of the operator and the degree of asepsis. There are, of course, certain indications for operation that we all recognize, such as when fair reduction has not been obtained after the exhaustion of all non operative means. One of the most valuable lessons, which experience teaches, is the estimation of risks and the value of precaution. Therefore, we have learned to obey this law, exhaust all non-operative means to secure reduction of a fracture before advising operation. A conscientious practice of this rule, to exhaust all non-operative means of reduction before advising operation, will obviate the necessity of operation in many so-called irreducible fractures. As an example, a case of fracture of the femur about the middle could not be reduced under an anaesthetic. Soon after the injury we applied extension and heavy, continuous traction for ten days, and then, under anaesthesia, reduction was easily accomplished. Intermittent and interrupted traction will accomplish very little. Proper, continuous traction, with a light weight, will accomplish more than heavy traction used at intervals. By the judicious use of our mechanical sense and mechanical apparatus, many so-called irreducible fractures can be reduced and maintained with more or less perfect restoration of function.

*Read before Tri State Medical Association of the Carolinas and Virginia, Norfolk, Va., February, 1913.

Reduction is always easier if attempted early, before the infiltration of the soft parts. After infiltration, reduction may be impossible. We should then use, full, continuous traction for one week, and then again attempt reduction under an anaesthetic. If we can't reduce, then we had better advise operation without further delay, for traction will be of little further benefit if it has failed after ten days continuous application.

The x-ray is the greatest aid in the treatment of fractures, if the plates are properly taken and interpreted. As usually used, the x-ray is a diagnostic means only. This is not the way to use it. The x-ray picture is rarely necessary for diagnosis except in obscure fractures, and those fractures near a joint. Of course a good x-ray is always an aid, but it is not essential in the diagnosis of fracture. It is of greater value in showing us the result of our attempted reduction. This x-ray examination should be made early: It is very difficult to correct imperfect reduction if we wait for swelling, infiltration, callus formation, and contraction of muscles and adhesions. If the x-ray picture shows imperfect reduction, we should immediately try reduction again under an anaesthetic; failing, we should use traction for one week and again attempt reduction. If the x-ray plate still shows that fair reduction has not been accomplished, we immediately advise operation, provided that the patient's general condition warrants the operative risk, and there is no contra-indication in the patient or bone.

The contra-indication to operation may be in the surgeon as well as the patient. Few surgeons undertake an operation for ununited fracture of the femur with the same degree of enthusiasm and confidence that they do other operations of equal or greater danger. This is due to the lack of training on the part of the surgeon. The mechanical skill required is entirely different from that required in abdominal surgery. Far greater care is necessary to prevent infection. Infection means failure, and failure leaves a living patient in a worse condition than before operation. Therefore, no operation should be undertaken for simple fracture, unless the operator has the mechanical skill and a perfect aseptic technique. Experience and mechanical skill can be acquired by performing these operations on the lower animals. My first plating operations were performed on beef bones. Aseptic technique can be perfected in the hospital. These operations should never be undertaken in private homes. The condition of the patient may be a contra-indication. Some of these operations,

especially those on the femur, produce severe shocks. The condition of the bone may prevent our carrying out our operative plan, even after the bone is exposed. Sometimes the bone is soft and porous from the production of an enormous amount of bone deposit, and it will not hold a plate and screws. We will have to remove this deposit and get down to hard, firm bone. In cancellated bone we will frequently get bad results, as the screws stay in a while and then pull out. In fractures near a joint, extreme care must be used to avoid opening the joint. Should infection occur it may enter the joint. Surgical infections of joints are always serious, and occasionally fatal.

The time of performing operation requires considerable judgment. When the damage of the soft parts is slight, operation can be performed early, but, as a rule, it is better to wait until all inflammation has subsided, say the end of the second week. During this period continuous traction should be used to prevent contraction of muscles and tendons.

In compound and gun-shot fractures, the soft parts are not only lacerated but infected. Therefore, we should first treat the infection and lacerations and deal with the fracture later, after all inflammation has subsided. In compound fracture, the skin around the fracture should be cleansed with tincture of iodine, and the wound cleansed by forceps and scissors. The wound should then be closed by loose suturing and compound fracture converted into a simple closed fracture without drainage. The loose suturing will allow the escape of serum, marrow oil, and inflammatory products. Frequently, cellulitis will develop in these cases and require one or more incisions and drainage. After the wound has healed, and inflammation subsided and infection has completely disappeared, we can operate if no union has occurred, or if viceous angular union, interfering with function, has taken place. In clean cases it is best to operate just as soon as it is shown that reduction cannot be accomplished and maintained. Nothing will be gained by delay. Delay only adds to the difficulties by the production of callus adhesions, and the contraction of muscles and tendons, interfering greatly with the accessibility and reduction of the fragments. The greatest difficulties of operation are due to delay. In these delayed cases it is very difficult to get rid of the callus adhesions and entangled muscles. The contracted tendons and muscles and fascia may absolutely prevent reduction and require excision of several inches of bone and consequent shortening of the limb. One has to do an operation

for old ununited fracture of the femur to properly appreciate these difficulties. It is "some" operation, and requires all of one's mechanical skill to dissect out the entangled muscle, expose the posterior surface of the bone and expose the fracture, and, even after the fracture is exposed, it may still be impossible to approximate the overlapped rotated fragments. It is in these cases that special apparatus is necessary. While I will not attempt to enumerate all of the appliances and mechanical inventions, I do wish to recommend the Modified Lowman Clamps and Turnbuckle, as devised by Gerster of New York.

The chief dangers of operating are dissecting errors, wounding of important vessels and nerves, and infection. Unless great care is exercised it is easy to wound important vessels and nerves in these distorted, twisted limbs. Greater care is necessary to prevent infection in operations for fracture than in any other surgical operations. Infection destroys the result. Infection almost always necessitates removal of the bone plats, wire, or appliance. Drainage usually means no union, continued suppuration, necrosis, cellulitis of the soft parts, and loss of limb or life. Therefore, with these dangers present, we should hesitate to advise operation for fracture.

I have had a reasonable experience in the operative treatment of fractures; have had my good results and bad results; therefore, I feel inclined to sound a word of caution, and call attention to the difficulties and dangers of this procedure. I believe we have neglected fractures and it behooves us to get better results in our fracture cases. I think we should attempt to improve our mechanical skill and mechanical apparatus, and secure these results without operation wherever it is possible. I believe we should learn to use the x ray not only as a diagnostic aid but also to show the result of our treatment, and to determine the prognosis. Wherever it is shown that fair reduction has not been accomplished, after the exhaustion of all non-operative means, then immediate operation should be advised, provided the patient's condition will stand the shock of operation, and the services of a surgeon, experienced in bone surgery, can be secured. Experience in general surgery, gynecology, and abdominal surgery does not qualify one to operate on fractures. Operation will never become the method of election for the treatment of fractures, but should be the method selected for all irreducible and ununited fractures, and cases of vicious union, in which function is greatly impaired.

Digitals.*

By William Francis Waugh, A.M., M.D., Professor of Therapeutics, Bennett Medical College, Chicago, Illinois.

Medical studies resemble the game of billiards in that no matter how much time and pains one gives, he still sees ahead of him possibilities excelling present achievements. But in medical studies we have this to confront us: that after having painstakingly worked out our problem to solution, having consulted, confronted, arrayed, and harmonized our authorities, until we can fix the matter absolutely right, we find that the whole thing is 'dead wrong,' and we must begin over again.

In this way we have recently had to unlearn most of our lore anent digitalis. We find by chemic test that the second year's leaves are not as strong as the first; that garden plants excel the wild; that Wisconsin foxglove is stronger than English, German or Bohemian; that the infusion does not differ from the tincture, both containing alike principles soluble only in water or in alcohol; that moisture does not impair the leaves unless mould attends; that leaves kept in cloth or paper bags for years excel the fresh imported leaves; and many other bits of knowledge painfully acquired are knocked from their pedestals by the modern iconoclasts, who assent to nothing until they make trials. All our lore goes to the scrap heap, and a new lot is presented.

H. C. Wood, Jr., and others, object strenuously to the physiologic testing of digitalis, comparing it with chemical testing, and characterizing it as "turning from a two hundred dollar chronometer to a dollar watch." These critics ask, Since the values of digitalis depend upon its active principles, why should we not judge it by them? They point out that the difficulty which drove the experimenters toward physiologic tests was that the toxicity of digitalis was greater than the combined toxicity of digitalein, digitalin, and digitoxin together. But it has been shown that this was due to imperfect extraction.

And, indeed, chemical testing would be ideal, if it could be ideally carried out. But, unfortunately, there is no practicable method either of obtaining the active principles of digitalis chemically pure, or of chemically demonstrating it if we could. Hence the physiologic test remains for the present the only trustworthy method of standardizing the drug. And the truth is that, in the case of the active principles, the physiologic method really does give very

*Read before the North Shore Branch, Chicago Medical Society, December, 1912.

satisfactory and trustworthy results, and is not open to the objections which may with justice be urged against it in respect to the galenic preparations. For while, in the case of the galenics, any method of standardization at best affords but an estimate of a mixture of several activities, every sample differing in their quantities and proportions, each differing from and interacting on the other in a manner not yet understood,—and, moreover, this mixture does not stand still, but deteriorates as to its active principles while its menstruum evaporates—so that the only way to ascertain its activities is to try it on the patient, no matter how abundantly it may have been standardized; while all these objections to physiologic standardization are valid in the case of the galenicals, they do not obtain in respect of the carefully extracted active principles, which lend themselves to simple and accurate physiologic standardization.

We first take up digitonin, a saponin-like glucoside, occurring in large quantities in the seeds. It forms one-half of the Germanic digitalin. When pure it is insoluble in water. Careful modern experimentation has shown it to be practically inert as to therapeutic action.

Digitalein (in a purified form now known as Gitalin—although the character of this substance is still obscure) is the water-soluble principle of the leaves, but little being found in the seeds. According to Kroft the term digitalein is a generic one for all the active water-soluble glucosides.

Digitalin (*digitalinum verum*) is the most important active principle of the seeds. It is slightly water-soluble, and is amorphous in form. None is probably found in the leaves.

Digitoxin is the insoluble principle of the leaves, none being found in the seeds. Naturally, being water-insoluble, we have believed that an infusion of digitalis does not contain this principle, although Hatcher asserts that it occurs in all official liquids. When extracted from the leaves, it usually contains a small proportion of gitalin.

Digitophyllin was described by Kiliani as a crystalline body similar to digitoxin.

For many years German digitalin has been the favorite preparation, because of its ready solubility in water. Owing, no doubt, largely to this favoritism, but partly to inaccurate observation, there has prevailed an idea that digitalin excelled the other principles in heart-tonic power, while digitoxin was the most powerful vaso-constrictor. Modern experimentation does not support this view. The most careful modern research fails to detect any pharmacologic or therapeutic difference between the three active principles. *Per se*, they are

alike in their action, and all are cumulative. Even in the rapidity of their absorption and effect, there is no great difference, as between the principles themselves. Variation in this respect depends either upon varying conditions in the patient or subject, favoring absorption or otherwise.

For reasons pertaining chiefly to its preparation, digitoxin is now regarded as the most trustworthy of the active principles. Modern experiment has shown it to be not more toxic than the others, as was formerly supposed. Although insoluble in water, it is dissolved readily in the digestive juices, and produces its effects within an average time of twenty-four hours. While its action is developed more slowly and persists for a longer period than some of the other glucosides, it resembles them pharmacologically in other respects. In the main it yields the pharmacologic and therapeutic effects of digitalis, but its expense of preparation, as well as its extreme potency, renders the pure glucoside unsuited to general prescription use.

While theoretically, therefore, the ideal method of using the digitalis glucosides would be to give each one separately, as each might be indicated, administering those most readily soluble in the body fluids when immediate effect was desirable, and those most slowly soluble when powerful prolonged action was indicated, practically we know now that this is inexpedient for a number of reasons. First, the glucosides that are obtainable in absolute chemical purity (like digitoxin) are too expensive for general use; and, second, those even more valuable on account of their readily elicited action (like digitalein) are now known themselves to be complex mixed bodies, varying widely in strength as presented in the drug market.

The digitalin most used, and a most excellent preparation it is in many instances, has certainly been the Germanic. I have used this substance for many years with excellent results. But this is itself a complex body—a mixture of true digitalin, digitalein, and digitonin, the latter glucoside predominating. Digitonin, as I have repeatedly pointed out, has a vasodilating action, and while recent studies have seemed to show that therapeutically it is of little value, I have obtained results with it when a calvative action upon the heart was desired. It has given relief in angina pectoris when glonoin failed. Of this I feel certain. Within the last two years, furthermore, there has been on the market a so called German digitalin which apparently was made from the leaves, not from the seeds, and therefore presented a quite different pharmacologic reaction from the German digitalin

with which we have been familiar for so many years. The appearance of this modified "German" digitalin was undoubtedly due to the shortage of seeds, from which it is ordinarily prepared.

The extreme variability of the galenic preparations of digitalis and their proneness to undergo change has led to an increase of interest in the digitalis glucosides. It has been felt by students of drug action everywhere that the glucosidic preparations must be resorted to, but the complexity of the problem has presented many difficulties, for which the well known German digitalin has seemed the only practical solution. Within the last two years, however, manufacturers have been working hard on this question, and several good proprietary substitutes have been offered. I shall not attempt to describe them or name them, but these efforts are assuredly worthy of praise and support, backed as they have been by much hard, painstaking scientific work.

Reduced to the simplest terms we may say that the glucosides are divisible into two classes. (Let us exclude in this classification digitonin, whose action is not desired, since it is locally irritant and a cardiac depressant). These two classes are those which are water-soluble and those which are not water soluble. The mode of action of all these glucosides is much alike, and for practical purposes almost identical. The only difference upon which we need to lay emphasis is the prolongation of action. The insoluble glucosides naturally do not exert their full activity so quickly, while they maintain it much longer, on account of their slowness of excretion. This leads to the phenomenon which we know as "cumulation."

The practical deduction is this: When we wish to give digitalis in "small doses, frequently repeated," in the classic alkaloidal way, in the treatment of acute infectious diseases where support of the heart is vital—pneumonia, for instance—we naturally would turn to the water-soluble glucosides, with which the danger of cumulative action would be least and using which the response would be as nearly immediate as possible. When treating essentially chronic cases, as in disease of the heart, where it is desirable to prolong the action of the drug over weeks and months, then we would naturally turn to the less soluble principles, or a mixture of the principles giving full-drug action.

Names are not of maximum importance—the essential thing is to secure preparations which will meet these two indications, and such preparations I believe are now available. All vasoconstrictors slow elimination and favor accumulation. When

we reflect that digitalis is usually dosed every four hours, we may calculate how much of it is locked in the system if the first dose taken requires 28 days to leave the body. Nor is this the extreme limit, for experimenters find that when an animal has been dosed with digitalis it cannot be used again for months, because smaller doses suffice to restore full effect. We see why Huchard advised the dose of digitoxin to be repeated only after six weeks; why the French, using this principle alone, have learned how to utilize it best and adhered to it for half a century, while Germany brings out a new digitalin every year. In general dropsies, when the capillary circulation has degenerated to a swamp, the heart enfeebled, we may restore and long maintain normal circulation by a dose of digitoxin exactly proportioned to the need, to give normal firmness to the vessel walls, and relieve the heart of the expense of power to force open the flabby walls. But if this dose is exceeded the vessels are contracted unduly, and the heart, despite its increase of power, must work harder to force the blood-stream through the narrow orifices.

This explains such a case as this: A man with advanced mitral disease and failing compensation was given digitalis. For two days he was better; then the difficulty began to recur, increased despite increasing doses of digitalis, and he died in a week—not of heart disease but because of the death grip of digitoxin on his arterioles. This also explains the observations of Petten, who found sparteine in two grain doses the most effective of heart tonics—but he used it in cases when digitalis had failed, and gave enough to force open the contracted vessels—for it is now known that sparteine is not a heart tonic at all, but a vasorelaxant, ranking with gelseminine and cicutine. So, also, McGuire, of Richmond, found sparteine a life saver in total auria, post operative, for the same reason.

We see that for each of the four glucosides of digitalis there is a field in which it is especially valuable, and in which it may be administered in scientific precision, with the certainty of results as calculated and of no untoward results. But in the wildest flights of fancy one cannot conceive of a case demanding the use of these four remedies at one and the same time. Meanwhile, to those who cling to the use of digitalis as a whole, I would commend the forcible words of the great French clinician, Peter: "In the treatment of heart diseases the fear of digitalis is the beginning of wisdom."

Medical Treatment of Chronically Discharging Ears.

By Harold Hays, A.M., M.D., Assistant Surgeon in Otolaryngology, New York Eye and Ear Infirmary, etc.

The chronically discharging ear is a very troublesome thing to deal with at times. The main reasons for this are that the discharge may be due to a variety of causes. In some cases no evidence of bony destruction may be found in the middle ear or antrum, the discharge being due to the constant drawing up of secretion from the nasopharynx; in other cases, the discharge is extremely fetid and caused by membranous or bony destruction in the middle ear itself.

It is surprising to see how many cases of chronic ears respond to medical treatment. And oftentimes the worst cases, which one expects will eventually succumb to a radical mastoid operation, will get well after one or two treatments. A few years ago, a woman came to me, complaining of a fetid discharge from the left ear since childhood. I cleaned the ear out thoroughly with peroxide and prescribed alcohol and boric acid instillations. After this one treatment and the use of the drops for a week, the discharge ceased entirely. On the contrary, I have been treating a young boy for the past year who has a continuous non-odorous discharge from the right ear which has yielded to no form of treatment. The perforation in the drum is small and the eustachian tube acting from capillary attraction is constantly drawing mucus and mucopus from the nasopharynx. This boy is now at the age of puberty, a time when all the turbinates are increasing in size, due to the activity of the erectile tissue at this age. I feel that this has a great deal to do with his present condition and that the ear discharge will eventually subside when he outgrows this period.

The secret of success in the treatment of chronic discharges from the ear is *cleantiness*. Not only the middle ear must be kept clean but the nasopharynx must be kept clean. It is not sufficient to ask the patient to attend to his ears. He must be put in the hands of a competent otologist who can treat the parts directly. The true anatomical condition which causes the discharge must be sought for. Meddling in the dark is worse than useless.

I firmly believe that at least 80% of chronically discharging ears may be cured by proper cleansing methods. The ear canal and middle ear should first be kept free from filth such as cerumen, hard, dried blood, and thick, drying pus. This is best accomplished by direct syringing with a 10% peroxide of hydrogen. The parts are then dried and a search made for patho-

logical conditions. All granulations should be burned away with the silver stick. Dead bone should be removed with fine forceps and recesses or pockets opened up. The office instillations of absolute alcohol alone or containing boric acid, iodine or alum, is of great value. The patient rests his head on the opposite side, the drops instilled and allowed to remain in the ear for five to ten minutes. The ear should be cleaned again and the patient told to keep it clean by using some irrigation at home, preferably a 1-10,000 bichloride of mercury solution.

A great deal of attention should be paid to the nose and throat in these cases, as a pathological condition of these parts will often cause a continuance of the discharge. Suitable operative procedures, such as the removal of tonsils and adenoids, correction of septal deflections, the proper treatment of hypertrophied turbinates, etc., will improve the catarrhal processes in the nose and throat and proper stimulation and antiseptics of the mucosa of the nasopharynx has a direct influence on the eustachian tube and middle ear, tending towards an alleviation of the discharge.

11 West 81st St.

The Influence on Metabolism of the Thyroid and Parathyroid Glands.*

By Chas. P. McNabb, M.D., Knoxville, Tennessee, Professor Diseases of Digestive System, Medical Department Lincoln Memorial University.

There seems to be a peculiar relationship existing between the functions of the various ductless glands, whereby a most wonderful and beautiful balance is maintained in the process of waste and repair of our bodies, the digestion of foods, the oxidation of fuel foods and the exact supply therefrom, and the radiation of heat, and the conversion of albuminous and inorganic substance into protein and salts exactly suited to replace the worn-out cells of the various tissues and organs of the body. The maintenance for so many years of that mystic red river upon whose bosom neither sail-nor steam-propelled vessel carries cargo, but whose current with its countless cells and its toxins and antitoxins, its opsonins and activins, and the Lord only knows what more, delivers to each waiting and wanting cell the atom that it needs, at the precise moment that it is needed without let or hindrance, or one second's delay, and as it delivers its precious freight here, there, and everywhere, it also from here,

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there, and everywhere, gathers into its stream the ash and waste of the burned out cells and their intermediate products, some of which are poisonous, and others further useful in the economy, e.g., (the liver colors the bile with the hemoglobin of dead erythrocytes) but all are carried hither and yon to be detoxified or eliminated, or both, and these ceaseless rounds of vital activity go on and on from infancy to old age, verily from the cradle to the grave.

These strange internal secretions exert a wonderful influence on the life and labor of that splendid system of conduits, the arteries, capillaries and veins, the filtration organs through which poisons are sluiced out of the system, and the great central pump station, the heart, itself a convincing testimonial to the power and wisdom of its Creator, who only could formulate and execute a system of laws so intricate and yet so perfect in application that the wisest men stand appalled in their presence, none ever daring to suggest even amendment or modification of them to the slightest degree.

The thyroid gland furnishes an active principle called iodothyron, a constituent of colloid found nowhere else in the body. Its function seems to be to increase protein and fat katabolism and increase carbohydrate metabolism. It also seems to detoxify the intermediate products of metabolism, or furnishes the blood with an active principle which is carried to other organs as hormones, that stimulate their function to accomplish the same end. It also exerts specific action on the central and sympathetic nervous systems and the skin and subcutaneous tissues.

There seems to be a relationship existing between the thyroid and the parathyroid glands and the islands of Langerhans in the pancreas, which equalizes the katabolism of sugar in the blood and muscles and organs of the body. The adrenals also, apparently, have some correlated influence indirectly on the pancreas, whereby a nice balance is maintained in the processes of metabolism and katabolism.

The thyroid secretion greatly increases the katabolism of fats and proteins of the body and apparently raises the limit of carbohydrate metabolism, but if the thyroid is removed or becomes atrophied or loses its function from any cause, the injection of adrenalin into the blood will not produce glycosuria as long as the function of the Islands of Langerhans remains intact. On the other hand, the parathyroid bodies seem to decrease the limit of the carbohydrate katabolism and if they are removed or their functions destroyed in any way, it is easy to produce glycosuria by the injection of adrenalin into the blood.

It is worthy of note in passing that the Islands of Langerhans are not connected with the pancreatic ducts but furnish a specific internal secretion that passes directly into the blood and through that influence maintains the balance of carbohydrate destruction.

The fact that the thyroid furnishes an active principle greatly increasing fat and protein katabolism leads to its use in a therapeutic way in the treatment of obesity and there is no doubt but that it reduces the excessive fat in the obese, but unfortunately it reduces the protein elements quite as fast as it does the fat, thus leading to great weakness of the individual and to weakened heart action, and in fact its long continuance, or if given in excessive quantities, it may suddenly wreck a fatty heart without previous warning. It may also, if given for too long, lead to glycosuria, there being already a predisposition of the obese to diabetes.

Another curious thing about the thyroid secretion is, that its deficiency retards the healing of bone fractures and its excess stimulates the repair of bone lesions; but there, as in obesity, the same danger constantly lurks around the case, to-wit: too great destruction of protein.

There are two diseases that well represent the functional importance of the thyroid and its effect on metabolism: Hyperthyroidism is the pathological feature in Graves' disease. Hypothyroidism is the cause of myxedema. The one disease is the exact antithesis of the other. One is indicated by rapidity of the heart's action with enlargement of the left ventricle of the heart; by bulging eye balls; by great nervousness; fine muscular tremors; weakness and general sensitiveness; sweating and occasionally fever, and glycosuria is not uncommon. The other is characterized by gradual swelling of the subcutaneous tissues and enlargement of the face and hands. The skin is dry and harsh and the hair is brittle. There is a slowness of thought and speech and muscular movements; the temperature is below normal; there is an impairment of all special senses and the excretions are usually diminished although urination may be increased. One disease is characterized by alertness and the other by mental dullness bordering onto idiocy, and both of the diseases are of thyroid origin.

May I add a few remarks from personal experience in the treatment of obesity? The one thing that I would like to call attention to is that in the treatment of obesity with thyroid extract the blood pressure should be frequently taken, and I have been led to believe that the first warning of danger is

the fading away and returning of the pulse at the systolic pressure point. I have on several occasions seen the pulse fade out at a certain point and return and mark a few points higher and drop back again, making it often difficult to fix the exact point at which the index should be read, and this feature in the blood pressure taking is a most reliable index as to the structural integrity of the heart muscle, and in obese patients who are under thyroid treatment it is a warning that protein katabolism has reached the limit of safety and that its further use is dangerous.

The Palace of the Dead.*

By I. W. Surratt, M.D., Sylvatus, Va.

I've been all around this country,
Walked and freighted, East and West,
And I've seen all kinds of people—
Seen 'em at their worst and best.
Death makes no impression on me,
'Though only in the short beyond,
But the memory's always with me,
Of a place in dear old Richmond.

'Twas a warm day in October,
When I first beheld the M. C. V.,
Where located in the city,
Matters little to you and me,
But within an ancient building,
Full five floors above the ground—
Sure, it dries my pen to tell you
Of the gruesome scene I found.

In a rather large apartment,
With a bare, well-cemented floor,
Soiled with grease and blood, were tables
To the number of a score
And at every table—Heavens!
I'm sure you think enough is said,
For they deal in human bodies
In the palace of the dead.

On the table just before me,
Lay what once could smile and speak—
Once, perhaps, a look or whisper,
Brought the roses to her cheeks,
But the boys who stood beside her,
Thrust aside the golden hair,
And without a pang or shudder,
Tore the flesh that once was fair.

Just beyond, a group of fellows
Stood around the lifeless clay,
Of what must have been a giant,
'Ere the sunset of his day.
Now, a set of pale-faced boys,
Armed with forceps, knives and hooks,
Tear away the mighty muscles,
Wonder showing in their looks.

Death was there, and gloom and shadows,
And the students with their knives,

Delving into mortal bodies,
To learn to lengthen human lives.
And I make a free confession,
That I turned away and fled,
But I'll ne'er forget the horrors,
Of the palace of the dead.

Diabetes Mellitus.

Answers to the following questions were sought by the authors: (1) Does nitrogenous alimentation in general have any influence on the carbohydrate coefficient? (2) Is there a difference in this regard between animal nitrogenous food and vegetable nitrogenous food? (3) Among the vegetable nitrogenous food, are there any having a special influence?

The tests were conducted on 17 patients, of whom only 8 were considered irreproachable for tabulating results. The procedure followed was, in brief, while keeping the intake of carbohydrates constant, to ascertain the effect of meats, soy bean, lentils, dried beans and potatoes on the glycosuria. By high nitrogen feeding is meant the ingestion, generally, of 100 to 120 Gm. of proteins daily, thought in a few instances the amount was carried up to 180 and 210 Gm.

The results obtain are summarized as follows: (1) High nitrogen feeling in the form of meat frequently lowered the coefficient of carbohydrate assimilation and increased the glycosuria. (2) High nitrogen feeding in the form of vegetables did not always have a constant effect of the same nature as in the case of the meats. (3) There seems to be a difference between animal and vegetable albumins in regard to their action upon the carbohydrate assimilation coefficient. (4) The action of the different vegetable albumins appears to vary in different patients and does not depend upon the nitrogen content of the albumins given. In some cases a diet relatively poor in nitrogen brought about a more marked glycosuria than a heavily nitrogenous (soy flour) diet, while in others the opposite effect obtained. Rathery and Lienard (Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris.)

After the acute forms of malarial fever are checked by quinine, a slow form of fever sometimes persists not amenable to the quinine. In such cases Tongaline & Quinine Tablets will prove very efficacious.

*Written during his first year in College.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

MORPHINE AND ITS DERIVATIVES.

Morphine, hypodermically, in large doses in some cases induces purging and also vomiting. Apomorphine, a powerful emetic, has some effect on the intestine. Codeine produces purging in animals and man more readily than morphine, while apocodeine brings on purging devoid of vomiting. The morphine group offers the greatest hope for the solution of the difficulty. Raviart was one of the first to use apocodeine subcutaneously for constipation and to report favorable results. Apocodeine 0.03 subcutaneously in dogs and cats produced purgation in from five to thirty minutes, while in man 0.03, or gr. $\frac{1}{2}$, will produce a soft movement in an hour. It should be administered in a one or two per cent. neutral solution which should be filtered. Thus prepared there is no feeling of nausea, and the irritation from the injection passes off in an hour. Apocodeine lowers blood pressure, causes vaso-dilatation and increases peristaltic movements, which probably is due to its sedative action on the sympathetic, inhibitory ganglia. Raivart and Barton in 1900 used apocodeine in 34 cases of constipation subcutaneously successfully. Guinard in 1903 used it in eight cases of constipation successfully. Heinz in the same year tried it in 30 cases, in about half of which he was successful. His conclusion was that it works well in many cases but that it is uncertain. Most experimenters found the purgative action came on quickly after the injection, sometimes within one or two hours, though Heinz gives the purgative action as occurring in from 10 to 12 hours. The preparation in general use is the hydrochlorate and the dose small, from .02 to .05 gm. The absence of influence on the stomach from apocodeine hypodermically is explained by the fact that the sympathetic gives but few if any fibres to the stomach. It does not act centrally on the brain for increased peristalsis can still be seen when the vagi and cord are cut. It cannot act on the extreme periphery, for if applied directly to the living intestine all movements discontinue. Injection of apocodeine in anesthetized dogs and cats shows that certain ganglionic cells are paralyzed. After the injection stimulation of the chorda gives no increased submaxillary secretion,

although the secretory neurons are active, because the exhibition of pilocarpine will give rise to a greatly augmented secretion. Apocodeine comes the nearest probably to being the ideal subcutaneous purgative, yet there are objections to it. Unfortunately, though readily soluble in water, it is an irritant to a certain degree, many patients having complained of pain as an occasional abscess, yet this may occur with almost any remedy used hypodermically. Its action is usually short of duration, the constipation generally returning in a day or two. Its actions on the numerous organs are too numerous and complex and involve too many symptoms.

DOCTORS AND DRUGS.

Who owns the prescription? The ancient conundrum has never been answered. Three claimants put in their claims:

The patient declares that he has bought and paid—perhaps—for the prescription, and it is his property, to do with as he pleases.

The druggist claims it as his, and cites the law that requires him to keep the prescription on file, for his own safety and the preservation of possibly valuable records.

The doctor denies both, and claims that the prescription is merely a memorandum sent by him to the pharmacist telling him what to dispense for the treatment of that particular case at that particular time. The patient has not purchased it, he has merely received a note of instructions for conveyance to the druggist. The latter has no claim whatsoever to owning what he has neither bought nor paid for; he is merely its custodian for the convenience of the doctor.

What has each done in the way of occupying the disputed territory?

We have before us an interesting document. It reads as follows:

"Dear Doctor,—
I have in my possession a physician's prescription for rheumatism, which has eliminated the pain every time I have used it. I am subject to acute attacks about once or twice a year, and, as above stated, this remedy surely does the work. I fully believe that, should you prescribe it for any of your patients, good results would be obtained. My own family physician prescribes this remedy with success, and therefore endorses it.

If you will send me One Dollar in enclosed envelope, I will take pleasure in mailing you a copy of this prescription, which you should have without fail.

Very truly yours,"

This man evidently feels that he has purchased from his doctor a remedy for rheu-

matism, and he proposes to make all the money out of other doctors he can, by selling them copies. But what he did buy—and perhaps paid for—was advice as to what to do for his own case. He is so firmly imbued with the idea of specifics for diseases that he assumes his remedy as one for any and all cases of that disease. The discrimination of his doctor that tells him the needs of that special case is lost upon him—and it is the doctor's fault. He should have made it clear that he was treating a particular form and manifestation of a malady as presented in that man; and the doctor, not the drug, would have received the credit. The doctor's most formidable rival is his drug.

The druggist? He has organized a gigantic corporate association to steal the doctors' prescriptions and contribute them to his corporation, so that every member may utilize them in stealing the doctors' business. Go into any drug store and note the goods labeled with the American Druggists Syndicate name, disposed so as to attract public attention, and realize that every one of these has been filched by a druggist from his prescriptions, without a penny recompense to the originator, and placed in the hands of every druggist in the organization to sell direct to the public. Thus every valuable prescription we write is used to enable all the druggists to supplant all the doctors over the country and steal their business. And we—fall for it.

The doctor? Well, if we really evolved from animals we doctors must have in us a strain of donkey that hasn't evolved much. The laws that endow every species of non-drug practitioner with legal rights to encroach on our field and malpractice on people, rigidly reserve to us the right of using drugs—and we quit using them. While our chiefest, most essential means of holding the public lies in our ability to recognize and treat individuals and to apply our remedies as indicated by such study, we turn wholly to the search for specifics for disease that may be applied alike to every case, by the nickel-in-the-slot method, doing away with any need for a doctor. Malaria? That means so much quinine, and the druggist can supply that. Diphtheria? That antitoxin—you get that at the dispensary. Why the doctor?

But the druggist does not lay aside the drugs—not by a very large Kentucky jugful. He stands close to the people and knows what they want. He has assumed the right of dispensing and holds to it undisturbed. The next step is to forbid doctors dispensing, and that he is moving heaven and earth to accomplish. Next comes his monopolizing the right to use

drugs, and we try our best to aid him by 'knocking' drug treatment on every possible occasion. The druggist is just 'Jake'; one of us; and we go to him freely with our little ailments, and find him ready to tackle the big ones too. The doctor is a lofty being to whom we take off our hats; he has a big knife in one hand, a syringe of serum in the other, and from his pocket peers a bundle of bills in huge figures—better keep away from him.

Had drugs been really studied, their possibilities run out to the end, and better remedies supplied, we would make no protest. This is very far from being the truth, as every man knows who has studied therapeutics. Viewed in the light of modern requirements we know very little about drugs and their powers, beyond the fact that they do influence the functions of the human body; and that if we know just how these are deranged in disease, and what remedies can restore normal function, all we have to do is to so apply the remedies as to secure the desired result. But this necessitates an intimate knowledge of physiology, the ability to detect aberrations therefrom, in other terms of diagnosis in its modern acceptance, and here we have that intimate personal study of the patient in which we have no rivals. No druggist, Christian scientist, chiropractic, or other untaught, untrained, inexperienced, practitioner of any sort can for a moment compete with the man who knows his anatomy, physiology, pathology, therapeutics, psychology, and the other things that make up the curriculum of a medical education.

But unless we know human nature, and hold ourselves close to the people, not as the magister but as the brother, as one of their own, we will be supplanted by men inferior to us in accomplishments but superior in business acumen as well as in humane sympathies.

J. W. R.

THE DISPENSING PROBLEM.

To the pessimistic question "Is life worth living" may be given the comprehensive answer, "That depends on the LIVER."

To the perennial query "Should doctors dispense their own remedies," may likewise be offered the same form of answer, "It depends entirely upon the doctor."

This problem has bothered both the doctors and druggists for many years and is about where it was those many years ago, at the present time, as far as a satisfactory settlement goes, and here it will remain for years to come probably, for several good and sufficient reasons.

The subject can never be rationally considered only in a general way, resolving it

into several integral subdivisions, each of which is necessary to the complete conclusion of the composite picture.

The first, and most important integer is the fact relative to the ability of the dispenser to intelligently handle his remedies safely if he wished to do so.

Second: and by no means of lesser importance than the foregoing, is the matter of *policy*, as evidenced by local environment.

Thirdly: Do proper facilities exist in the locality for dispensing his prescriptions should he give them to patients to be filled at the local drug stores?

Considering the first fact, and its bearing on the matter, one has but to glance at the curriculum of the average medical school, and note the meager attention given to pharmacology, and its subdivisions of pharmacognosy, pharmacodynamics, and therapeutics. Many matriculates in these institutions go directly from other schools, and, unless they have had previous experience with drug remedies through service in drug stores, are lamentably ignorant of the simple principles governing the dispensing or handling of the *tools* through which they are to earn a livelihood in their chosen profession. To be sure some of them have a college degree, but in the profession of medicine that amounts to about as much as a pig's tail, simply ornamental. Starting with this handicap there is very little opportunity to add to this necessary knowledge during their four years at the institution, for time does not allow the proper consideration of this branch.

This unfortunate fact results in graduating a lot of otherwise good men to the profession, who can only become willing prey to the scores of "Detail-men" from the manufacturing chemical houses, from whom they must learn what therapeutics they use during the early years of their endeavor.

This class of men should never dispense anything but sealed and tagged remedies, as they have not the necessary knowledge to enable them to do otherwise.

The consideration of the second subdivision of this subject calls for diplomatic astuteness on the part of the doctor which may be the turning point that will lead him to success or failure in a given locality.

The druggist is usually a person of considerable influence in his locality. He can make or break a doctor either by fair or foul means, in short order, if he so desires. So if a doctor elects to practice in a locality that is strange to him, he will be wise if he seeks out the leading druggist and sends all the prescriptions to him that he can, for this same druggist works along the lines of reciprocity always.

Attention to the last division of this theme unfortunately depends upon conditions that are beyond the control of anybody. They are the result of commercial evolution that has completely changed the nature of prescribing and dispensing remedies. The average drug store from ocean to ocean is a commercialized notion store that does most of its business after twelve o'clock noon, and does not close until midnight. During the early hours of the day a large proportion of these stores are in charge of non-registered clerks, and it is not safe to send any prescription to them to be filled if it requires careful manipulating. This is a fact that can be proven by anyone who will take the trouble to learn facts.

Now, given the above conditions which are not at all overdrawn, how is one to consider the subject of whether he should or should not dispense his own remedies in his practice? Even after the above conditions are considered there remains another obsession that has loomed up sporadically for years on this sea of discontent between the doctor and druggist, and that is "Counter Prescribing."

Whatever sauce is used with the goose is good enough to serve with the gander, and if the druggists are fussy about the doctors dispensing, these same druggists should not be allowed the latitude that they have in allowing their clerks to prescribe anything from a dose for a headache at the soda fountain to a remedy for sore throat.

Look at the subject from whatever angle you may, it is evident that certain customs and procedures have been so long in evidence that the whole matter has become so chronic that it is absolutely incurable.

PHENOLPHTHALEIN.

This new remedy for constipation has also taken a place among the remedies used hypodermically. Fleig has separated a soluble salt of phenolphthalein which he calls sodophthal, and which he reports as being used with success as a hypodermic purgative in the clinics of Montpellier. The chemical composition of the salt does not seem clear. Probably it is the disodium salt of the phenolphthalein which has been described by Mayer and Mark, and which is made by the addition of sodium hydroxide to phenolphthalein. A very soluble salt combining a very weak acid with a strong base it is readily hydroxidizable and acts like a solution of the alkali itself, that is it is decidedly irritable. On account of this highly irritant character there does not seem a very bright future for this salt as a hypodermic purgative. Abel and Rowntree found that warm olive oil would dissolve phenolphthalein, and many of its derivatives, and

that this oil preparation injected under the skin of dogs produced purgation. Experiments proved that more prolonged purgation was induced when phenoltetrachlorophthalein was employed than any other member of the group.

Mode of Preparation.—Heat natural olive oil slowly to 210° C. and add finely powdered phenoltetrachlorophthalein, stirring all the time. The heating is continued for five minutes and the temperature not allowed to exceed 220° C. The oil solution while hot is filtered into sterilized flasks and put aside for use. This will dissolve the chlor body at the rate of about 0.2 gm. to every 10 cc. of oil, while it will dissolve the phenolphthalein itself in a slightly greater degree. To avoid saponification it is not best to prepare too much at once. Phenolphthalein shows a tendency to come down but the chlor body does not precipitate. The drug is practically absorbed in its entirety from the local seat of the injection into the general circulation, which occurs in from 16 to 24 hours. Part of the drug is reabsorbed from the large intestine which prolongs the purgative action. Prolonged experiments on 40 dogs showed that this injection in neutral oil was not followed by any untoward results, either locally or systematically, and that no system other than the alimentary was affected. A series of experiments in Johns Hopkins Hospital were carried out giving injections of this remedy in the obstetrical wards. Some received it in lieu of the initiative purge, others when a purgative was indicated later in the lying-in period. The results were not entirely satisfactory, but it is thought that the doses were too small. However, a decided laxative effect was obtained. The stools became softer, semi fluid porridge like, and in one instance contained the drug as late as the fifth day. In none of the cases did local inflammation or irritation occur, nor were griping pains or colic complained of. No drug could be found in the urine or milk. Experiments were made on 30 cases of chronic constipation in the clinic at Johns Hopkins Hospital. The striking feature of this study was the prolonged action of the drug. Purgation persisted in many for four or five days. Experience shows the value of this remedy to be the prolonged nature of its action, absence of crampy pains and colic, the constancy of its results. Objections: insolubility of the drug in water, slight solubility in oil, slow action (16 to 24 hours), mild character of actions, laxative rather than purgative.

Editorial News Items.

Dr. E. A. Henneese, of Glen Alpine, who killed his fellow countyman named Pitts some months since in a street duel, was acquitted at his trial recently. The Doctor himself sustained several wounds, including a pistol-shot wound through his lung, in the encounter and his acquittal meets with general approval in the community.

Dr. Platt W. Covington, formerly of Wadesboro, N. C., who has been doing most acceptable field work in the hookworm department of the State Board of Health for some two years past, has been placed in charge of the newly created Bureau of County Health with headquarters in the Department of Public Health at Raleigh. It will be the aim of this new Department of the State Board of Health to care for and develop the increasing interest in county health work throughout the State, and especially to facilitate health work of those counties where a whole-time health officer is in charge.

The offices of Dr. J. B. H. Knight, of Williamston, were burglarized in August and fixtures and equipment to the extent of over \$200.00 were carried away. Later the culprit was caught.

In the Superior Court at Greensboro damages of \$1000.00 was awarded the plaintiff in an action against the city of Greensboro on account of the city's sewer discharges into North Buffalo Creek and consequent depreciation of the plaintiff's land as the result. More than forty similar suits against the city have been docketed for trial, but the court ruled that only plaintiffs possessed of riparian rights could institute such suits, thus reducing the number of similar suits against the city yet awaiting trial to seven.

The Governor of South Carolina has made requisition upon the Governor of North Carolina for the person of one J. F. Gregg, a former citizen of that State wanted in South Carolina for unlawfully practicing medicine. Up to this date the requisition has been declined, the view being taken at Raleigh that the offense is one merely in violation of South Carolina statutes and not extraditable. The South Carolina authorities are later pressing the proposition that Gregg defaulted his bond under which he had been held for trial and his bondsmen seek to save the forfeiture, hence it is likely the State will turn Gregg over to the South Carolina authorities.

In the Superior Court at Durham, Judge Frank Carter, of Asheville, recently ruled physician's certificates affirming the physical inability from sickness of defendants to appear in court for trial would not be accepted. "Only the actual presence of the defendants or an undertaker's certificate of burial" the learned jurist is quoted as ruling.

The Seaboard Air Line Railway is defendant in a novel suit brought recently in Wake county, N. C., in which a farmer "demands \$10,000 damages for afflictions brought on himself and family through mosquitoes generated by defective drainage under the railway tracks on his farm." The plaintiff alleges great physical and mental suffering and distress through the onslaught of mosquitoes inducing malarial fever and big doctor's bills besides damage to land and crops. The issue will be watched with interest by sanitarians throughout the State.

Dr. J. V. McGougan, of Fayetteville, royally entertained the entire membership of the Hoke Cumberland County Medical Society with their families and other invited guests to the number of more than 100 with an old-fashioned barbecue at his attractive country home "Skiboo Place" on August 11th.

Dr. C. B. Woodley, of Kinston, won his case in the Superior Court recently involving the right of a telephone company to discontinue the doctor's 'phone service without the physician's consent.

Dr. Thos. E. Anderson of the State Board of Health, addressed the meeting of the State Association of County Commissioners in annual session recently at Statesville.

Dr. M. R. Gibbon, of Maxton, announces his retirement from general practice, and will devote himself to eye, ear, nose and throat work.

Dr. James S. Rhodes of Martin county, who has been doing postgraduate work in Baltimore and Boston for the past six months has returned to his practice in Williamston.

Dr. L. H. Schubert, recently of Asheboro, has located at Aurora, Beaufort county.

Dr. J. N. Upsbur, of Richmond, Va., has removed his office and residence to 1103 West Franklin Street. Office hours: 9-11 a. m.; 4-5 p. m. Sunday by appointment. 'Phone, Monroe 85.

Messrs. Rebman, publishers, New York City; take pleasure in informing the profession that the International Medical Congress, held during the first week in August, 1913, has awarded to them the gold medal for the best medical publications.

Dr. Augustus Maverick, one of San Antonio's most popular physicians, was killed on August 18 while defending his home from a negro who was trying to kill the white servant girl.

Dr. Maverick was a native of San Antonio, and though still a young man was making his place among the men of affairs. He received his early education in his native city, attended the University of Texas, and then left for the University of Pennsylvania where he graduated in 1907 with the degree of doctor of medicine. He continued his studies in the Philadelphia Hospital as interne and post-graduate student. Later he went to Vienna, Austria, and studied under the experts of that city.

He was devoted to his profession and was well known outside of the city, both as a physician and as a contributor and editorial writer to several National medical journals.

Dr. Wm. J. Clontz, of Alexander, Buncombe county, N. C. was shot and instantly killed August 7th by a mail carrier with whom he had a previous difficulty.

Dr. R. P. Miller, a prominent physician of Jefferson, S. C., died suddenly on August 14th at his home. The cause of his death was heart failure. Dr. Miller graduated from the Medical College of South Carolina at Charleston, S. C., in '67. He was a Confederate soldier, having served through the entire war. He was, at the time of his death, in his 74th year, and held in the highest esteem by all who knew him.

BOOK NOTICES.

Labyrinth Papers. By George W. MacKenzie, M.C., Philadelphia, Pa., 1913.

The papers contained in this volume were written for various Societies and Journals between June, 1908, and February, 1911. While each paper practically comprises a chapter and is complete in itself, still the various papers dove-tail into each other, thus making the series complete by covering every phase of the subject of the Labyrinth and its diseases. Very few repetitions occur, but where they do the subject is of enough importance to warrant them.

This book, which contains 222 pages of text, is beautifully bound and illustrated

and sets forth so much information that is of value, is one that we take great pleasure in recommending to the public.

Marriage and Genetics. Laws of Human Breeding and Applied Eugenics. By Charles A. L. Reed, M.D., F.C.S. 182 pages. (5¼x7½). Price, including postage, \$1.00. Subscription only. The Galton Press, Publishers, Cincinnati, Ohio.

This book is from the pen of a surgeon, one whose daily life is largely engaged in dealing, professionally, with conditions that affect the power of the human race to perpetuate itself.

It was first conceived as a message from the operating room, a danger signal or a series of danger signals from the hospital ward, a revelation from the council chamber—that great and sacred confessional of the medical profession. It is an effort to overcome the ignorance which, in too many instances, keeps innocent victims from protecting themselves and their offspring from disease and degeneracy. It is an effort to avert many of those conditions that destroy the possible happiness of the married state and convert the bridal chamber into the anteroom of the divorce court.

The author has prepared a brief comprehensive and comrehensible statement of the ten fundamental laws of race perpetuation—the Decalogue of Human Breeding. He has added a brief description of the two diseases, incidents of vice, that are today poisoning the race.

The book contains 182 pages, is well indexed, neatly bound, and is a very interesting book. We advise every one to read it who is interested in this subject.

Malaria: Etiology, Pathology, Diagnosis, Prophylaxis, and Treatment. By Graham E. Henson, M.D., member American Medical Association, Florida Medical Association, Southern Medical Association, American Society of Tropical Medicine, Medical Reserve Corps, United States Army (Non-active list). With introduction by Charles C. Bass, M.D., Professor of Experimental Medicine, Medical Department Tulane University, New Orleans. Twenty-seven illustrations. St. Louis: C. V. Mosby Company. 1913.

There is little doubt that the eradication of malaria is the most serious problem that confronts the sanitarium in all tropical and sub-tropical countries. It is doubtful if there is any disease as easy to diagnose as malaria, if proper attention be paid to diagnostic methods, or if there is any that responds as surely to treatment, if proper treatment be instituted; for it must be re-

membered that quinine is one of a very few therapeutic specifics in our possession.

It was the belief of the author that one of the most sacred duties that the general practitioner owes to his community is his assistance in the eradication of malaria, and inasmuch as he considers that one of the most, if not the most, important prophylactic unit to be the early recognition and proper treatment of the disease, especial attention has been given to diagnosis and treatment.

It has given the reviewer a great deal of pleasure to look over this up-to-date book. The author writes in a very attractive style and those who read it will be much benefited. It contains 190 pages with a great many appropriate illustrations.

The price of the book is \$2.50.

Bacteriology. Including Animal Parasites. By Robert L. Pitfield, M.D., Pathologist to the Germantown Hospital; Late Demonstrator of Bacteriology at the Medico-Chirurgical College, Philadelphia, etc. Second Edition with 4 plates and 85 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1913.

This little book was designed by the writer to serve the needs of the medical student preparing for examination, and for the practitioner of medicine who desires to acquaint himself with the principal facts of the rapidly growing science of bacteriology. An effort has been made to reduce the subject matter to as concrete a form as possible.

While the literature of the subject of immunity is as vast almost as the rest of bacteriology, yet it is hoped that the chapter in this book on immunity gives in outline the essential accepted teachings on the subject.

Minute details of cultures and technic are not given. They must be sought for in books on descriptive bacteriology. The author has drawn very freely from many standard text books. Many illustrations are from Kalle & Wassermann's Atlas, Williams, McFarland, Tyson's Practice and Abbott. Rearrangement of chapters and new matter has been added throughout the book. With this and the chapters on filterable viruses, the author was assisted by Dr. Herbert Fox of the University of Pennsylvania.

This little volume is neatly bound and contains 280 pages; it is very appropriately indexed and the illustrations are good. The price is \$1.00 net.

Syphilis and The Nervous System. For Practitioners, Neurologists, and Syphilologists. By Dr. Max Nonne, Chief of

the Nervous Department in the General Hospital, Hamburg, Eppendorf. Authorized translation from the second revised and enlarged German edition by Charles R. Ball, B.A., M.D., Chief of the Nervous and Mental Department, St. Paul Free Dispensary, etc. 98 illustrations in text. Philadelphia and London: J. B. Lippincott Company. The price of this book is \$4.00.

Six years ago the first edition of this work was issued. Many new and important discoveries have been added to this the second edition, the discovery of the spirochæte pallida by Schardinn being among them. The discussion concerning lues nervosa in the first edition was only briefly touched upon in a purely clinical manner. It is given a thorough consideration in this volume. The results of investigation and practice along these lines are set forth very clearly.

The last six years brought to the writer an abundant material of syphilogenetic diseases and he used this material for illustration whenever it brought out new viewpoints and in the discussion of old and new questions of contention helped to shed new light. Though the book maintains the character of the personal, individual experiences of a clinician, the consideration of the essential and important contributions to the subject in hand have not been omitted. It is written out of the practice for the practice.

This volume we believe is the most valuable contribution on this subject that has ever been written. The illustrations are numerous and very appropriate. It is a volume of 406 pages. We take great pleasure in recommending it to all.

Anatomy, Descriptive and Applied. By Henry Gray, F.R.S., Fellow of the Royal College of Surgeons; lecturer on Anatomy at St. George's Hospital Medical School, London. New (American) edition, thoroughly revised and re-edited, with the ordinary terminology followed by the Basle Anatomical Nomenclature, by Edward Anthony Spitzka, M.D., Director of the Daniel Baugh Institute of Anatomy and Professor of General Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1502 pages, with 1225 large and elaborate engravings. Cloth, \$6.00, net; leather, \$7.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

Gray's Anatomy has for over fifty years been the best known work in all medical literature. Measured by the number of students, physicians and surgeons who use it, and by the way in which they keep it

and constantly refer to it, it is incomparably the greatest text-book in medicine.

The announcement of a new edition of this great work is always a matter of exceptional interest and importance to the entire profession, and the appearance of this particular edition is especially significant because it ushers in the new era of teaching, marked by the raising and standardizing of the requirements in almost all of the medical colleges of the United States. It is generally conceded that in the near future anatomy will everywhere be taught according to the Basle Anatomical Nomenclature, and the B. N. A. terms have therefore been introduced in parentheses following the ordinary terminology, which is still in more general use, so that either or both may be used with facility.

The revision for this edition has been very thorough. Every line has been critically considered and the whole work has been brought abreast of the latest knowledge of anatomy and the most approved methods of presentation. A feature in which Gray has always been unique—the engraving of the names of the parts directly on the illustrations—is carefully preserved. The student is thus enabled at a glance to visualize the name of the part, its position, extent and relations, thus photographing in the memory knowledge otherwise painfully difficult to retain. Colors are abundantly used, and dissecting directions accompany the descriptions of the parts. A superb index comprising both terminologies in a single alphabet completes all the service which it is possible for a book to render. Its combination of unrivaled engravings and an incomparably clear text, reflecting the life-work of many of the world's masters of anatomy, and its peculiar quality of presentation which facilitates to the utmost the acquisition and retention of a sound knowledge of its subject, have maintained it in the premier position of all text books on anatomy for over fifty years, and it was never stronger in attraction or farther in advance of its competitors than in this new edition.

The Practical Medicine Series. Comprising Ten Volumes on The Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume V. Pediatrics, edited by Isaac A. Abt, M.D., Professor of Pediatrics in Northwestern University Medical School, Attending Physician Michael Reese Hospital. Orthopedic Surgery, edited by John Ridlon, A.M., M.D., Professor of Orthopedic Surgery, Rush Medical College. With the col-

laboration of Charles A. Parker, M.D. Series 1913. Chicago: The Year Book Publishers, 327 South LaSalle Street.

This volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume being complete for the year prior to its publication on the subject of which it treats. The series is arranged in several volumes thus enabling those interested in special subjects to buy only the parts they desire. The price of this volume is \$1.35 and the price of the series of ten volumes \$10.00.

The reviewer looks over every volume that comes to this office with a great deal of pleasure and profit. This volume contains 235 pages and has several very appropriate illustrations. The architecture of the volume is similar to those that have been published before.

The Accessory Sinuses of the Nose. By Ross Hall Skillern, M.C., Professor of Laryngology, Medico-Chirurgical College; Laryngologist to the Rush Hospital; Fellow of the American Laryngological and Otological Society; Fellow of the New York Academy of Medicine; Member of the Society of German Laryngologists, etc. Philadelphia and London: Lippincott Company.

During courses of teaching the treatment of accessory sinus diseases very frequently students have made inquiry regarding the proper handbook to aid their studies in this direction. In the German language Hajek and Zarnieo would instantly rise to the mind of the well-equipped teacher as admirable works, both from the viewpoint of scientific accuracy and that of practical application. In the French language Luc, and Sieur and Jacob, have contributed works of decided merit. In the English language Logan Turner has displayed a commendable spirit on research and has collected much valuable information of a general character, but it cannot be claimed that his work is adaptable as a general text book. Several excellent works of American and English authors, embracing the Nose, Throat and Ear as a whole, have appeared, but their general scope has not permitted the consideration in minute detail of nasal accessory sinus disease.

To set forth in the English language a thorough and exclusive treatment of this subject has been the inspiration of this work. It will be noted that repetitions occur in several places. These have been intentional, not only to thoroughly impress these parts on the mind of the student but to obviate the necessity of continually referring to other portions.

The price of this most excellent volume is \$5.00.

An Atlas of the Differential Diagnosis of the Diseases of the Nervous System. Analytical and Semeiological Neurological Charts. By Henry Hun, M.D., Professor of the Diseases of the Nervous System in the Albany Medical College; Member of the Association of American Physicians, the American Neurological Association, etc.; author of "A Guide for American Medical Students in Europe." The Southworth Company, Publishers, Troy, New York. 1913.

The peculiar characteristic of this book on diagnosis is that it gives to the student or physician a key by which, in a comparatively easy manner from one or more important symptoms, he can arrive at a diagnosis. It also has the advantage that it divides the diseases into groups, the members of which have a definite relationship with each other; so that in the process of using the charts the student is constantly catching glimpses of the natural relationships between the different diseases of the nervous system. It is very seldom that you will find this subject presented as it is here.

The charts and very full index are a great help to the student unfamiliar with the diagnostic and technical terms which are of necessity used throughout the book.

No pains have been spared on the part of either the author or the publishers to make this volume a very valuable one. It is one that we take a great deal of pleasure in recommending to our readers.

Napoleon's Campaign in Russia Anno 1812. Medico-Historical. By Dr. A. Rose. With illustrations by O. Merte, taken from Yelin "In Russland, 1912." Published by the Author, 173 Lexington Ave., New York. 1913.

The author has given us in this little volume some details of the history of events causing and surrounding the deaths from cold and hunger and fatigue occurring in Anno 1812 in Russia. The story presents to us in a very graphic manner the life of Napoleon as the great man, the soldier-emperor, the favorite hero throughout Germany, the great benefactor of Germany who accomplished great things because he had great power and committed great faults because he was so powerful.

The book is an instructive one, but one that is so interesting and well written that you forget all else in reading it.

Physical Diagnosis. By Richard C. Cabot, M.D., Assistant Professor of Medicine in Harvard University. Fifth Edition, Revised and Enlarged, with 5 Plates and

268 Figures in the Text. New York: William Wood & Co., MDCCLXXII.

With the revising and re-setting of this book, twenty-three new illustrations have been added. The most important additions are the sections on the Phlebogram and the Arteriogram, the re-casting of the section on Blood Pressure and the Arrhythmias, as well as those on Neoplasms of the Lung and Pleura, on Subphrenic Abscess and Peptic Ulcer. There is a more adequate notice of the Bismuth X-ray examination of the stomach given in this edition.

This volume contains 519 pages of text. It is very carefully indexed and beautifully bound, thus presenting a very attractive appearance indeed. It is a book that we should like to see every doctor own.

The Surgery of the Skull and Brain. By L. Bathe Rawling, F.R.C.S., Surgeon, with charge of out-patients, Senior Demonstrator of Practical Surgery, Demonstrator of Operative Surgery, St. Bartholomew's Hospital, late Hunterian Professor, etc. London: Henry Frowde, Hodder & Stoughton, Oxford University Press, Warwick Square, E. C. 1912.

This work on the Surgery of the Skull and Brain is based on experience derived, and on research carried out, during the past ten years. Cranio-Cerebral Surgery is progressing very rapidly and this book represents the most modern aspects of the case and is brought up-to-date by means of a recent visit to some of the leading surgical clinics of the United States of America. The author has spared no pains in overcoming the difficulties of writing a book of this nature.

The publishers have made this volume very attractive in appearance. It is beautifully bound and the illustrations are many and accurate, which of course adds to the value of the book.

Vaccine and Serum Therapy, Including also a Study of Infections, Theories of Immunity, Specific Diagnosis and Chemotherapy. By Edwin Henry Schorer, B.S., M.D., Dr. P.H., formerly assistant Thomas Wilson Sanitarium for Children, Mr. Wilson, Maryland; assistant Rockefeller Institute for Medical Research, New York City, and at one time member of the faculty of the University of Missouri, of the University of Kansas, and the Department of Preventive Medicine and Hygiene of Harvard University. Second Revised Edition. St. Louis: C. V. Mosby Company. 1913.

When the first edition of this volume appeared vaccine and serum were just coming into use and the subject had not been studied nearly so carefully as it has now.

In this edition, some of the theories and individual experiences have been substantiated by the experiences of others and some have been refuted by further investigations. In order that vaccine and therapy be used in the best way their use must be based upon the diagnosis of the specific etiological factors in the disease. For this reason an entire chapter has been devoted to the general principles of specific diagnosis of the etiological factor.

Vaccine and serum therapy are very valuable as specific remedial agents and every physician should have enough knowledge to enable him to decide when vaccines or sera should be given and what results are to be expected from their use. This volume presents the subject in a concise and fair manner, thus proving of great assistance to the practitioner.

The price of this book is \$3.00.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume III. The Eye, Ear, Nose and Throat edited by Casey A. Wood, C.M., M.C., D.C.L., Albert H. Andrews, M.C., Gustavus P. Head, M.D. Series 1913. Chicago: The Year Book Publishers, 327 South LaSalle Street.

This is the third volume of The Practical Medicine Series. It is divided into three parts: The Eye, which is in charge of Casey A. Wood, M.D.; The Ear, of Albert H. Andrews, M.D.; and The Nose and Throat, of Gustavus P. Head, M.D.

This volume contains 370 pages of text, and is well bound, indexed, and illustrated. The price is \$1.50.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume IV. Gynecology edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago; and Herbert M. Stowe, M.D., Associate in Gynecology, Northwestern University Medical School; Attending Obstetrician to Cook County Hospital. Series 1913. Chicago: The Year Book Publishers, 327 South LaSalle Street.

This is the fourth volume of a series of ten issued at about monthly intervals covering the entire field of medicine and surgery. The series is published in several volumes in order that those interested in special subjects might buy only the parts they desire.

The price of the series of ten volumes is \$10.00 and of this volume \$1.35.

President Wilson and Mexico.

President Wilson made it plain last month that his policy regarding Mexico was not merely a drifting one, or one lacking in motives or intentions. His policy, like that of the previous administration, assumes that the internal affairs of Mexico belong to the Mexicans, and that, while the United States has greater interests in the country south of the Rio Grande than has any other outside government, there is no ground for interfering or intervening unless some wholly unexpected contingency should arise. Our wishes towards Mexico are those of a good neighbor, hoping to see a regime of constitutional order and liberty soon established. Our Government naturally cares about American citizens and their lawful interests in Mexico, and will be solicitous to protect every American in his rights. But it is not regarded as the business of the Government at Washington to guarantee the comfort or the prosperity of an American citizen who chooses to subject himself in a foreign country to prevailing conditions of disorder that involve no intentional discrimination against Americans.—From "The Progress of the World," in the American Review of Reviews for September.

Abstracts of the Leading articles of the month.

Tinnitus Aurium.—Wittmaack (Deut. med. Woch.) states that he does not regard a sharp distinction between objective and subjective noises as feasible. In the same manner, it is not always possible to distinguish between subjective sounds and entotic sounds. The characteristics which can be attributed to the sounds, however, should be noted in each case. After entering upon the subject of the presence or absence of rhythm in the sounds, which can be ascertained by requiring the patient to describe them fully and imitate them, he turns his attention to the etiology of the various forms of tinnitus. The writer commences with a large group in which no objective changes can be found in the ear. When the hearing is not reduced in sharpness, an organic aural basis of the tinnitus may be excluded. When the noises are rhythmical, the first

possibility is to identify the rhythm with that of the arterial pulse. At times the noises are objectively audible by means of the stethoscope or otoscope. Under normal conditions the arterial pulse is not heard by the subject, but pathological changes in the peripheral circulation or in the heart may render it audible. Aneurysms in the neighborhood of the ear or neck frequently produce intense and irritating noises. In those cases the pulsation may be seen or felt. But cases of this kind are rare. Again, tumors, such as a goitre, enlarged glands in the neck, etc., may cause the tinnitus. Should peripheral causes not be found, the heart must be examined to ascertain whether the noises are due to a definite heart disease or even to a temporary increase of the cardiac activity due to bodily exertions or to psychological excitement. An increase in pressure of the cerebral fluid, and also sounds produced in anaemia, must likewise be thought of. Less frequently the rhythm corresponds to that of the respiration. At times periodically recurring sounds of an irregular rhythm may be produced by the condition of contraction of certain muscles. In these cases a rapid tempo similar to the ticking of a watch may point to a spasmodic condition of the muscular apparatus of the Eustachian tube. The next group of cases dealt with in which no changes in the ear can be found includes those cases with arrhythmical noises. In many cases the noises are the only symptoms of the condition, or by far the most prominent one. The basis on which such noises are produced is most commonly neurasthenic. The author calls attention to the fact that a perfectly normal person hears very similar noises when in an absolutely noiseless room. The difference between the normal perception of noises perceived in a so-called acoustic chamber and those of neurasthenic tinnitus lies in the pathological tendency of the neurasthenic to exaggerated self-observation. The noises are not imagined. He discusses the probable production of the sounds in these cases. Somewhat similar are the noises in hysteria, only in these cases the psychical element is pronounced. In treating of the prognosis of tinnitus he states that much depends on the cause. When there is a neurasthenic basis an examination of the ear and any form of local treatment will probably do harm, and may alter the prognosis considerably. On the other hand, when the cause lies in the circulatory apparatus, cure may be effected at times, as, for instance, when there is an operable aneurysm. Should an aneurysm be present which cannot be dealt with surgically, symptomatic means may do some good. The same holds good in the cases

of tumors, goitre, and the like. In the case of cardiac disease, the treatment will have to be directed entirely to the endeavor to compensate the cardiac defect. When the heart condition is amenable to treatment the noises may disappear. In neurasthenia the attention of the patient should be deflected from his ear. Suggestion may be employed with advantage. Wittmaack finds it useful to place the patient in a room where some loud, rhythmical noise can be heard. The babbling of a brook or some similar noise in nature, or, failing this, the ticking of a loud alarm clock, may suffice to cover the tinnitus. The prognosis is unfavorable when the tinnitus is due to a combination of neurasthenia and arterial pulsation. Next he turns to tinnitus associated with organic changes of the ear. He discusses the production of noises as a result of inflammatory processes of the middle ear or of the tube or its pharyngeal orifice. The most favored view is that the noises are produced in the muscles or vascular apparatus. Cerumen is, further, a fruitful cause of tinnitus. Passing on to catarrhal processes of the middle ear, the formation of adhesions and oto-sclerosis, he admits that the etiology is by no means clear. In the last named the noises frequently take on a pulsating character, which would lead to the supposition that they are produced in the vessels. Acute processes involving the middle ear yield better to treatment than chronic processes, and in the majority of those the otologist will not be able to do entirely without symptomatic remedies. In the last place, he deals with tinnitus arising in the course of disturbance of the internal ear. The treatment depends in these cases on whether one is dealing with an intoxication or infection, a nerve change or a constitutional disease. If a poison can be avoided, such as quinine, salicylic acid, alcohol, or nicotine, the prognosis is so far good, provided that the damage done is not irreparable. Less good can be done when there is locomotor ataxia, general paralysis, leukæmia, cachexia, or arterio-sclerosis. In conclusion, he deals with what he speaks of as symptomatic treatment. Bromides and valerian are mentioned first. Next, iodides, sweating agents, arsenic, and thyroid substance are cited as yielding good results at times. Counter-irritation, hyperæmia, and hydrotherapeutic procedures are often worth trying. In desperate cases an attempt may be made by lumbar puncture, and, as a last resort, he cites the operative opening of the labyrinth and its destruction. The effect of these various remedies and the actual prognosis of each case will depend on the minute analysis of each case; and it may be possible, when all the participating factors have

been considered, to combine several therapeutic measures with beneficial results.

Infection of the Kidneys by Bacillus

Coll.—Munich (Archiv. fur. Klin. Chir.) reports 60 cases of renal infection, in which bacteriological investigations were made, brings out the following points: As a rule the prognosis in acute unilateral coli infection of the kidneys is good, but it is doubtful when both kidneys are involved. The necropsy on two patients who succumbed to the infection showed the kidneys to be permeated with multiple miliary abscesses. The ultimate results of the infection were studied in 21 cases which the author followed up for a considerable period. In 18 of these the bacillus coli was the only germ found; in 1 case there was a mixed infection, and in 3 cases the nature of the infection was not stated. The treatment was conservative in 11 cases, nephrotomy was performed in 4, and nephrectomy in 6 cases. Subsequently the urine was sterile in 6 cases, in 6 a pure culture of *B. coli* was found, in 6 this germ coexisted with staphylococci, in 1 a pure culture of staphylococci, and in another a pure culture of streptococci, were found. Ten patients showed no symptoms, 9 still suffered from occasional but slight attacks of pain in the region of the kidneys, and 2 suffered from severe and continuous renal pain. He finds that nephrectomy gives good results in cases of severe unilateral infection. But most cases of slight and acute coli pyelitis and pyelonephritis require no operation, for they rapidly react to rest in bed, urotropin, and a liberal consumption of water. When fever, rigors, and unilateral pain persist, the author recommends catheterization of the ureter as the best aid to drainage; but he seldom practices lavage of the renal pelvis as advocated by Casper, for he finds this method is no improvement upon simple drainage.

A New Operation for Floating Kidney.

—Kocher (Wiener med. Wochenschrift) describes the following operation: After exposing the kidney through the customary lumbar incision it is forced out of the wound by pressure upon the abdomen, and the lower pole is grasped with the fingers. A strip of fascia about 20 cm. long and about 10 cm. broad is then removed from the fascia lata of the right leg and the four corners of the strip fixed with artery clamps. In its center a longitudinal incision about 4 cm. is made, into which the lower pole of the kidney is inserted, so that it lies like a stone in a sling. The kidney is then fixed to the margins of the opening by means of four sutures passed through the capsule. One-half of that portion of the sling adjacent to the opening is carried over the pos-

terior surface of the lower half of the kidney and fastened with two sutures to the median and lateral borders of the organ. After this the other half of the sling is placed upon the anterior surface of the kidney, fastened to the capsule with a few stitches, and sutured at the median and lateral border of the organ to that part of the fascial strip lying on the posterior surface. It will thus be seen that the transplant is transformed into a closed sac with a small opening below, which contains the lower half of the kidney, while the upper portion of the sac is fixed. By traction upon the upper ends of the sac the kidney can be lifted into any desired position, so that all danger of its rotation is avoided. Only sufficient traction is made to raise it to the proper level, no force being required to restore it to its normal anatomical relations. After the desired position has been secured it is very easy to suture the four ends of the fascial sac to the wound margin, especially to the lumbo-costal and lumbo-dorsal fascia, in order to obtain firm fixation.

Tuberculosis in Childhood.—Ham-burger (The British Medical Journal) says that an infant is as susceptible to infection with tuberculosis as with measles, and only a single short contact with a patient suffering from advanced pulmonary tuberculosis is sufficient to cause a primary lesion which in 95 per cent. is situated in the lungs, and in 5 per cent. in the skin, intestines, or reproductive organs. In one case a child aged 11 months, developed tuberculous meningitis without having been exposed to infection, according to the mother. Careful investigations revealed, however, that a consumptive had once played with the child for half an hour six weeks earlier. Another child had been kept in hospital for five months on account of nocturnal enuresis. During the first four months weekly tests with tuberculin were negative. One day the child played with a consumptive in another ward for half an hour, and five days later the tuberculin test was positive. The primary lesion in a child's lung varies from the size of a cherry stone to that of a cherry. Children who die from other causes than tuberculosis, and who have daily been exposed to tubercle bacilli for several months, seldom harbor more than one or two, or at most three, tuberculous lesions in the lung. The primary lesion has therefore clearly conferred a certain degree of immunity, just as a chancre confers immunity from a second syphilitic infection. In towns children between the ages of 12 and 13 years who die of other diseases than tuberculosis, or who are tested with tuberculin, show that

infection has already occurred in 95 per cent. In the first year of life infection has occurred in only 1 per cent. In the second year this percentage has risen to 10, in the third and fourth years to 30, in the fifth and sixth years to 50, and in the seventh to tenth years to 75. The death rate from primary tuberculosis among children infected in the first year of life is about 80 per cent., and the disease is active in almost per cent. The death rate from tuberculosis among children infected in the second year is between 10 and 20 per cent., and it is only 3 to 4 per cent. among children infected in the third to the sixth year of life. After this age it is scarcely 1 per cent. It follows, therefore, that isolation from consumptives of children under three years is of supreme importance. The sputum flask and other contrivances against infection are futile, and can never prevent infection *per se*. After the age of three prophylaxis against infection is no longer as important as prophylaxis against an outbreak of tuberculosis already grafted on to the body. The most important measures are those which affect the child's general health and well-being. Cod liver oil, with or without creosote, is the best medicine. Tuberculin can usually be dispensed with, and its vagaries are yet so little understood even by the specialist that its use in general practice is undesirable. Above all, large doses of tuberculin must not be given. Hitherto more harm than good has been done by tuberculin among children. It is also seldom necessary to use it for diagnosis, which should be based on clinical methods. The prognosis must largely depend on whether an active tuberculous lesion is primary or secondary. The latter is the most serious, and when pleurisy with a serous effusion immediately follows a primary infection the prospects of recovery are relatively good. This point is illustrated by the case of a child, aged three years, who developed caries of the right index finger. Recovery occurred in a few weeks. But two years later an injury to the finger caused a relapse which ended in the destruction of the bone, in fistulæ, and chronic suppuration. The prognosis must also depend on the date of the primary infection, and the earlier this has occurred the worse must the prognosis be. He points out that only by study of tuberculosis in children can this disease in adults be understood, and that the researches of the past six years have made clear much that was hitherto obscure in the etiology of tuberculosis in children.

Red Degeneration of Uterine Fibromyomata.—Smith and Shaw (Jour. Obst. Gyn. Brit. Emp.). The remarks of these gentlemen are based upon the examination

of twenty-four specimens and the publication of Leith Murray in which he brought forward evidence to prove the hemolytic action of lipoids in these red fibromyomata. They say that uterine fibromyomata of a red color are divided pathologically into two classes, thrombotic and angiomatous. The thrombotic are of a deep red color, which is not lost in Kaiserling solution; nor is there any free blood on a cut surface nor in the tissues. The thrombotic exhibit various degrees of thrombosis: the early ones showing only a collection of thin threads around the walls of a few vessels, while the late ones have all the vessels plugged with them. The thrombotic have clinical symptoms of abdominal pain, tender tumor, rapid enlargement of the tumor, general ill health, rise of temperature and pulse rate; these symptoms may occur singly or in combination. All the thrombotic fibromyomata contain a large quantity of fat due to the retardation of the circulation by the thrombosis of the blood vessels. The red color of the tumors is due to the hemoglobin staining associated with the action of the accumulated fat. The majority of the specimens in this group contain a large number of thin walled vessels: in this respect the two groups are similar. The angiomatous group contains large numbers of thin-walled vessels. These vessels are filled with red blood corpuscles: in some specimens the congestion is further advanced and free blood is found in the tissues (hemorrhage). The color of these specimens is bright red and tends to fade in the preservative fluid. It is due entirely to the large amount of blood in the tissues, and not to hemolysis and hemoglobin staining. The patients do not have any clinical symptoms other than bleeding and a feeling of weight due to the presence of the tumor.

The Treatment of Gangrene of the Extremities.—Drs. Ehrlich and Maresch (Wien. klin. Wochenschr.) present a report on 81 cases of gangrene of the extremities treated during the past twelve years. These comprised chiefly gangrene due to arteriosclerosis and diabetes, 44 cases of the former and 29 of the latter. In summarizing their views the authors state that in all forms of gangrene which do not have their origin in diffuse or progressive disease of the arterial system, as, for instance, those following injuries, burns or frostbites in young persons, it is advisable to await the line of demarcation and then to amputate in healthy tissues unless an accompanying septic process necessitates earlier intervention. In cases of arteriosclerosis with a fair condition of the general health, it is preferable to let the toes separate spontaneously. Ex-

articulation in gangrene of the foot is not to be recommended on account of the slight chance of permanent healing. Hence in cases in which demarcation is unsatisfactory; or where the process advances or there are present infectious complications or unbearable pain, amputation alone is to be considered. The operation should be done at the thigh in senile gangrene, while in pre senile gangrene amputation of the leg below the knee gives good results if the extension of the process does not serve as a contraindication. Furthermore, the pulse should be distinctly perceptible in the popliteal artery and the amputation stump should bleed actively during the operation. Amputation of the lower extremity in diabetes, if at all attempted should always be done at the thigh.

Salvarsan and the Nervous System.—

Spiehoff (Muench. med. Woch.) analyzes the question of the frequency of neuro-recurrence in the treatment of syphilis on the basis of his wide experience with salvarsan and other medicaments. Finger has stated that since salvarsan has been introduced the frequency of recurrent symptoms of nervous implication has increased markedly, and this he ascribes to the treatment. Spiehoff agrees that more cases of nervous symptoms occurring during the course of syphilis after treatment have been since salvarsan has been introduced, but that he also finds that they are more common when small doses of salvarsan are used, and he has come to the conclusion that they occur in inverse proportion to the size of the dose. In his cases he has registered 0.97 per cent. of neuro-recurrences. If only those cases are included in which observation was carried out for a fairly long time; the frequency is found to be considerably greater, but when analyzed in relation to the intensity of the dose he is able to show that while twenty-five per cent. of the cases which were given two injections of an alkaline solution intravenously, and which were kept under control for at least four months, showed neuro-recurrences, only 12.5 per cent. were met with when three injections were given. The phenomenon was not seen at all when a more energetic treatment was followed. The Dr. gives details of the symptoms under discussion in his cases. The Dr. says that the prognosis and treatment of these symptoms do not differ from similar cases observed before the salvarsan era. The Dr. finds salvarsan extremely useful in combating these symptoms, and indeed, goes as far as saying that in one of his cases the removal of the removal of the symptoms would not in all probability have

cleared up so completely with mercury as it did with salvarsan. In the course of these observations he finds that a comparison of the analyses of the spinal fluid yields more exact information than Wasserman's test does, both in regard to diagnosis and treatment. The cell counts and the determination of the albumen content by Nonne's method of precipitation often reveals signs of increase of the disease, when the complement deviation test of the serum of cerebrospinal fluid gives no information at all. In speaking of the salvarsan treatment of tabes he feels justified in recommending its trial in all cases. An existing nervous lesion independent of syphilis, such as epilepsy, is not affected one way or the other by salvarsan, he especially points out that fits are not produced by the injections. In syphilitic affections of the central nervous system he gives salvarsan and mercury when the signs are localized to one or two cerebral nerves, but when the process is more diffuse he prefers to start with mercury, and later on to give salvarsan in gradually increasing doses when tolerance is established. He records two cases of very severe symptoms following the injection of slightly acid solutions of salvarsan for primary and secondary syphilis, respectively, on one of which a fatal termination occurred. In conclusion, he expresses the opinion that in spite of Finger's, Ravaut's and Levy Bing's publications, salvarsan should be given in full doses even when there are signs of spinal irritation. Lumbar puncture forms the best means of treating the headache arising in these cases.

Behring's New Diphtheria Prophylactic.—Von Behring (Deutsch. med. Woch.) says that the present method leaves much to be desired, since it depends upon the injection of a foreign serum. The result is that the immunity lasts but a short time, as the foreign proteins are rapidly eliminated and that repeated injections involve the risk of anaphylactic attacks. Behring now proposes to confer immunity to diphtheria by means of the injection of a mixture of diphtheria toxin and antitoxin, the object being to permit the toxin to cause the production of immune bodies in the child's own organism, while the antitoxin, simultaneously injected, protects him. Theoretically, an immunity so produced would be at once far more intense and far more durable than one following the injection of the ordinary antitoxic serum.

It has been a matter of some difficulty to find the most suitable proportions in which to mix the two ingredients. Numberless animal experiments have shown that whereas the proportion of antitoxin, that will just render the toxin harmless, is very constant

for most species of animals, it varies greatly from one species to another. It is no simple chemical combinations. Thus monkeys require several hundred times as much antitoxin to neutralize a unit of toxin as guinea-pigs. Human beings are fortunately not so sensitive.

The prophylactic mixture has been tested in the clinics of Schreiber at Magdeburg and Zangemeister at Marburg on children as well as on adults. The reactions were usually very slight or entirely absent, and the patient's serum after the lapse of two or three weeks contained a varying but considerable amount of antitoxin, always enough to furnish a satisfactory protection. Occasionally the reaction, though never alarming, was a little more violent. It was then invariably followed by the production, in the patient's blood, of unusual quantities of antitoxin. Thus in one child, the blood was found to contain 600,000 antitoxic units. Such quantities are of course unnecessary, since ordinarily 250 units suffice for a satisfactory protection. Some serum was withdrawn from this child and injected into another. This is the first time a passive immunization with human diphtheria antitoxin has ever been carried out.

One disadvantage of the new method is the long interval required before the immune bodies are produced by the organism. Not only is the individual not protected during the interval, but it is even possible that there may be a preliminary 'negative phase' in which his resistance to the infection may be subnormal. Moreover, time alone will tell how complete and how persistent the resulting immunity is.

Test For Bile Pigment In Blood And Urine.—Pakuscher and Guthmann (Med. Klinik,) says that reagent is ether containing 0.5 per cent. of iodine. To 5 c.cm. of urine 1 c.cm. of the reagent is added and the mixture shaken thoroughly. On standing, two layers form, an upper brownish, ethereal one and the lower urinary one. The latter is colored green if bile be present. If now the ethereal layer be poured off and the urine shaken up several times with fresh ether so as to remove the excess of iodine, the green color becomes still more marked.

To demonstrate the presence of bile-pigment in the blood, 2 c.cm. of serum are shaken up with 3 c.cm. absolute alcohol and filtered. This removes the albumin. To the filtrate, add a few drops of 25 per cent. HCl, c.cm. water and 0.5 c.cm. of the reagent. Shake and, if necessary, again remove the iodine by repeated shaking with fresh portions of ether. A green color, in the watery layer, indicates

the presence of bile-pigment.

Utero-pelvic Phlebitis and its Surgical Treatment.—Vanverts and Paucot (Rev. mens. de gyn., d'obst. et de ped.) says that septic materials may be spread throughout the system in two ways, by the blood current and by the lymphatics, or both of these may act together. Venous infection brings about phlebitis and uterine and peritoneal thromboses. They may extend by way of the pampiniform plexus and ovarian vein, or through the uterine vein and the hypogastric. In the march of thrombosis the process may not be limited to the small pelvis, but may reach the primary iliac vein and inferior vena cava, or even go further and pyemia result. The author considers whether operation is justified in such cases. In cases in which the phlebitis is the cause or the most marked manifestation of infection, as it is found to be in one-third of the autopsies, surgical interference would seem justified. The location and extent of the thrombus are very variable. It may be located at a distance from the uterus. If there is only a localized focus of infection we may hope to remove it by operation. In very virulent infections the walls of the veins are unable to resist the infection and ulceration takes place, and the infection passes out of the vessels. In these cases even very early venous ligation would be too late to do any good. Another necessary condition for successful operation is that the thrombus should not reach too high up. To ligate a vein containing clots and pus would be both useless and dangerous. He concludes that theoretically ligation is justifiable in thrombo-phlebitis that does not show extravascular lesions, that is, in subacute or chronic pyemia of slight virulence, and in those cases in which the localization of the process within the pelvis allows of intervention beyond the area of thrombosis, in the healthy portions of the veins. The results of operation have been tabulated in eighty-two cases, in which there were forty-nine deaths and thirty-three recoveries. In the recovered cases the process was chronic and of slight virulence, the operation being done late, as late as the twentieth day after the abortion or confinement. In the fatal cases there were extravascular abscesses, lymphangitis, or extension to the large venous trunks. Operation is of value in only a certain number of cases. Contraindications to operation are undoubted signs of periphlebitis; and the presence of multiple and early metastases. When in the course of a thrombophlebitis, after a remission chills begin again, surgical intervention is

allowable. Operation must bar the way to embolisms and prevent the carriage of infectious products into the venous system; it must also embrace the entire phlebotic area.

Secretory Activity of the Mammary Glands Independently of Pregnancy.

—(Edinb. Med. Jour.,) Oliver says that it not infrequently happens that milky fluid is obtainable from the human female breast independently of the influence of pregnancy, but apparently only in women living a marital life, whether they have already borne children or have never been pregnant. It may be noted within two or three months after marriage and after prolonged periods of sterility, and may persist for years in spite of the continuance of a state of sterility. It may or may not be noted in conjunction with some trifling derangement of some gross lesion of the organs of generation such as cystic degeneration of one or both ovaries, one or more fibroid neoplasms in the uterus, descent of both ovaries, or more or less leukorrheal discharge and no other apparent defangement. In the majority of cases the fluid is only obtainable by firm but gentle pressure upon the breasts. The presence of milky fluid in the breasts is consequently not an infallible sign of pregnancy.

Treatment of Pelvic Inflammation by Autoinoculation.—Chapple (Lancet, Lon.)

says that if it is now generally accepted that an increased blood supply to an infected area causes the liberation of an increased quantity of toxins into the general circulation, thus producing an autoinoculation with the products of the actual offending organisms. So by raising the local temperature of the pelvis sufficiently for a definite length of time an increased blood supply to the pelvic organs is induced, and an autoinoculation capable of sufficiently accurate control is effected. The difficulty of isolating the offending organisms is thus overcome. The best results will be obtained by regulating the dose both as regards quantity and time of introduction, the aim being to give the second dose when the negative phase produced by the first is over and the positive phase has been definitely entered upon. By this means we can raise the patient's index to the offending organisms and markedly increase her ability to deal with them and their products. Should we be dealing with a case in which the trouble is dependent on an inflammatory mass due to an organism now dead, the pelvic congestion is still of great value, in that the increased vascularity assists in the absorption of the inflammatory pro-

ducts. The desired pelvic congestion is easily produced by the heat emanated from several powerful electric lamps, which are suspended from a suitable cradle, which surrounds the patient's pelvis. By introducing into the vagina a suitable Ferguson's speculum with its upper end in the posterior fornix and consequently lying almost in contact with the inflammatory area, and its lower end in direct communication with the bath, it is possible to raise the vaginal temperature very considerably and also the actual temperature of the pelvic structures in the neighborhood of the pouch of Douglas.

The Influence of the Ovary on Sugar Metabolism.—Stolper (Gynak. Rundschau) presents confirmatory experiments made in the human subject which he has already carried out in animals. The writer previously showed that in castrated animals the power of assimilation of sugar was reduced. The Doctor's observations include women in whom the ovaries were removed by operative means or in whom they did not functionate for physiological or pathological reasons. Thirty-eight cases were thus observed, in sixteen of which the uterus and ovaries were removed. In the remainder the ovaries alone were either removed or they did not functionate for various reasons. In all cases the urine was examined before and after the ingestion of 100 grams of grape sugar. It was found that the power of assimilation in women in whom the ovaries had been removed was markedly reduced and that similar results were observed during the menopause and afterward. He believes that the processes are very complex, and that the result is partially due to the effect on the pancreas and the adrenal system because these glands with internal secretion are probably closely connected with the ovarian physiology. The practical value of this observation is believed by the author to be an important means of determining functioning power of the ovaries. Thus the reduction of the ability to assimilate sugar where diabetes can be absolutely excluded is due to a diminished functioning ability, whereas an increase of this ability is probably due to increased ovarian function.

The Relation of Chronic Appendicitis to the Female Pelvic Organs.—Mueller (Munch med. Wochenschr.) presents his observations in a series of 300 cases operated upon by him in which there were only nineteen acute inflammations. Among the 281 chronic cases were seventeen in which extensive adhesions of the pelvic organs were present in which the appendix was likewise involved. In 191 cases out of the

remainder, cystic degeneration of the ovaries on both sides, and in forty salpingitis likewise was noted. In a large number of the cases a history of intestinal disturbances combined with dysmenorrhea were noted, although marked attacks of appendicitis were denied or did not appear until later in life. As the symptoms of endometritis, salpingitis, ovaritis, etc., usually disappear after the appendix is removed, Mueller considers that this work must be regarded as the most important etiological factor in their production. He believes that in women appendicitis is usually chronic in character, and rarely heals spontaneously. Local tenderness is frequently absent, due probably to the generalized adhesions present, as further observations have further convinced him that in the majority of cases chronic pelvic disease has an intestinal origin, and that gonorrhea occupies a less important factor in the etiology. The method of infection is due, Mueller believes, through the lymphatic and the retroperitoneal tissues and also through the appendiculoovarian ligament. Other ways are by direct contact of the inflamed appendix with the pelvic organs and by the free discharge of an exudate from the involved appendix in the pelvis. The chronic character of these conditions lead to an involvement of the nervous system, and operation is therefore indicated as soon as the diagnosis can be confirmed. He believes, moreover, that the cystic oophoritis as well as the frequent involvement of the tubes are the most frequent causes of sterility, and that these depend directly upon appendiceal disease.

The Treatment of Amenorrhea.—Hofstater (Zentralbl. f. Gynak.) presents a communication on the results of treatment in thirty-three cases with hypophyseal extract. The patients included cases of amenorrhea dependent on a primary hypoplasia of the uterus or the ovaries, on general infantilism, on atrophy of the uterus following lactation, on anemia, cachexia, and on mild adnexal disease. In about two-thirds of the cases bleeding from the genitals took place after several injections which both subjectively and objectively presented every evidence of menstruation. In about one-third of the cases continued injections or the administration of tablets were sufficient to keep up the periods. Even in cases where the bleeding did not take place a general improvement of the patient occurred, which was also noted in cases following castration and the menopause. In very fat women it is also advisable to combine this treatment with thyroid administration. These apparently favorable clin-

ical results cannot as yet be explained until the effect of extracts of the anterior and posterior lobes as well as the intermediary portion of the gland can be differentiated physiologically.

Sodium Carbonate in Ringworm.—

Nock, in the *British Medical Journal*, says that the following method was shown him by a conscientious but rather ignorant woman who has had charge for many years of a home for waifs and strays. She said that she had never known more than two applications necessary. Take a piece of sodium bicarbonate (the household washing soda) about the size of a walnut, and hold it against a red-hot iron (Nock uses the poker heated in the consulting-room fire); then rub the melted end freely into the ringworm, and particularly thoroughly if it is in the scalp, which must have had the hair around the lesion cut short. One application is sufficient on the body, but on the scalp it may be necessary to repeat it six or seven days later. Usually no dressing is necessary, though if sore boric acid ointment may be used.

Fibrositis.—Llewellyn (*Proc. Roy. Soc. Med.*) in regard to the etiology of this condition, lays stress upon the great frequency with which subjects are the victim of ancestral or acquired gout. No less than 28 per cent. showed definite stigmata in the shape of tophi, or a classical arthritic outbreak in the big toe. This incidence of gout would have been appreciably higher, if this motley group of disorders comprised under the term *gouty diathesis* was included. Other etiological factors of importance are influenza and sore throat, but in the majority of instances, we have to rest upon an assumption of *auto-toxæmia* of varied origin, as the responsible *fons et origo mali*. Of exciting causes, the chief are atmospheric changes, gastro-intestinal derangement and prolonged muscular exertion. With regard to the latter, while inordinate exercise is prejudicial, yet rest of the affected muscle is equally detrimental. The predisposing effect of certain occupations is strikingly exhibited by the fact that out of a series of 1000 hospital male cases of this disease, 600 were miners, laborers, gardeners, or coachmen. As regards the clinical features, the mode of onset in the acute varieties is sudden, and usually occurs during some muscular effort. The abruptness is more apparent than real, for in all probability the morbid process has been slowly but silently maturing, for enquiry often elicits the statement that for some days previously the patient had been conscious of stiffness in the affected mus-

cles. It is improbable that an absolutely healthy muscle is ever suddenly attacked by acute muscular fibrositis. Of constitutional symptoms, a rise of temperature is far more common than is supposed, even in the milder form of lumbago, torticollis, etc.; and even in these localized varieties, endocardial changes are by no means common. On the subjective side the salient symptom is pain, often of excruciating intensity, which follows not only a volitional contraction, but also passive movements of the affected muscles, and those functionally allied to them. On the objective side, a muscle attacked by acute fibrositis undergoes three main changes: (1) An increase in volume as betrayed by swelling; (2) increased local reaction as shown by undue warmth of the affected area presumably due to increased heat production; (3) an alteration in the tone of the muscle. In regard to the course of the disease the important point is that the objective changes outlast the subjective symptoms. Thus pain, the first symptom to appear, is also the first to disappear, this being closely followed by decline of local heat and swelling. But the marked hypertonus of the muscle present during the acute stage, while it diminishes with the decline of the subjective symptoms, does not wholly disappear for some considerable period after their cessation—clinically this is represented by a feeling of stiffness.

In the chronic form of the disease, the intense pain of the acute variety is transmuted into a more or less persistent aching and stiffness, which from time to time lights up during periods of exacerbation. The muscular hypertonus is maintained at a lower level, except during periods of relapse. Its intensity is an index of the degree of irritability of the affected muscle. Another factor which makes for the maintenance of this tonicity, is the development of nodules, in the belly of the muscle more commonly in the neighborhood of its tendinous attachments. Tendinous structures are richly supplied with peripheral sense organs, which are keenly sensitive to the slightest variation in tension. These perpetuate the irritability of the muscle and the resultant hypertonus. These fibrous overgrowths are the objective expression of the rheumatic predisposition. The excessive irritability of rheumatic muscles is capable of the following explanation. The basal pathological change is an inflammatory process in the interstitial fibrous tissue of the muscles of toxic or infective origin. In this tissue lie embedded the afferent sense organs, the muscle spindles, and the organs of Ruffini or Golgi. Presumably, either through actual invasion or mere contiguity, these sense

organs become hypersensitive, and the impulses transmitted by them are correspondingly intensified: consequently a condition of muscular hypertonus ensues. This accounts for the pain and the spasmodic contraction of rheumatic muscles. The reason why painful sensations are aroused in the diseased muscle when their antagonists undergo contraction is probably the following. Normally the elongation of a muscle which follows the shortening of its opponent stimulates mechanically the sensorial end-organs of the muscle undergoing extension, and thus abolishes its tone. But the phenomena exhibited in the most acute forms of muscular rheumatism seem to indicate that this automatic inhibition of tone is in some way interfered with. In the normal state, where flexion of the spine occurs through contraction of the ventral spinal muscles, their opponents, the dorsal extensors undergo simultaneous elongation. In acute lumbago, on the other hand, owing to the flaw in the mechanism, the usual inhibition of the tonus of the lumbar extensor muscles does not ensue, and hence the sudden painful check. The author summarizes his conclusions as follows: Rheumatic muscles are in a state of hypertonus. In the acute variety of fibrositis, the hypertonus is of high grade, but of comparatively brief duration. But even so, the circulation through the muscle is impeded, and becoming surcharged with blood, an increase in the volume or swelling of the muscle takes place. This is, however, temporary, and subsides with the lessening of the hypertonus. When the pathological state is prolonged, as in chronic forms, the hypertonus, though slighter in degree, is correspondingly persistent, and a state of chronic venous stasis ensues in the affected structures. When such a state of venous stagnation occurs in any organ or tissue, sooner or later proliferative changes take place in the involved structures—the so-called congestive induration.

Contraction Ring as a Cause of Dystocia.

White, in *The London Lancet*, says that the contraction ring as a cause of dystocia is one which is neglected in the standard text-books on obstetrics, and the ring itself is frequently confused with the retraction ring of Bandl which forms as a result of obstructed labor. The ring forms over an area of slight resistance and tends to fit into depressions of the child. The wall below the contraction ring is not thinned or overdistended and the presenting part not forced down into the pelvis. In a contraction ring case the fundus, as a rule, is soft and still undergoing contractions and relaxations. Except in rare cases of organic

obstruction to dilatation of the cervix (e.g.; by carcinoma) a retraction ring is always seen late in the second stage. Several writers state that the retraction ring is more easily palpable per abdomen than a contraction ring, but the contraction ring has frequently been felt on abdominal examination; thus it appears doubtful if this will be of practical help in making a differential diagnosis. When seen early, before being exhausted by fruitless obstetric operations, the patient with a contraction ring is in good condition compared with the exhausted state of a patient with obstructed labor. Premature rupture of the membranes is the most constant etiological factor. Intra-uterine manipulations are also very frequent, but unless some intrauterine manipulation had been done the diagnosis could not have been made. It is obviously necessary to presuppose the existence of increased uterine irritability in addition to the two factors mentioned to explain the infrequent occurrence of contraction rings. All forms of malpresentations are common. About 10 per cent. of recorded cases have been delivered of macerated children: A long first stage with weak pains is usual. A contraction ring is twice as common in multiparæ as in primiparæ. In well-marked cases one-third of the mothers and one-half of the children die. Three cases of labor with this complication are recorded by the writer. Expectant treatment is useless, as in a severe case the condition persists. Acting on the supposition (probably incorrect) that the condition is one of pure spasm, both chloroform and ether have been tried very fully, but have entirely failed to relax the ring in severe cases. Morphia has failed even in large doses. Chloral hydrate has not been given any extensive trial, but from its action in cases of trismus of the cervix might be of use. Isolated cases are recorded where other drugs have apparently done good, for example, 10 minims of amyl nitrite by inhalation. In the slighter cases manual dilatation of the ring frequently succeeds. "Willett's continuous weight traction" is limited to cephalic or breech presentation. An instrument is fixed to the fetus and a weight traction of 6½ pounds suspended. It succeeded well in his case. Forceps are limited to cephalic presentations with the head below the ring. In the more severe cases they fail entirely. Embryotomies for this condition have been extraordinarily difficult from the high position of the head and the difficulty of getting the instruments past the ring. After perforation of the head the shoulders are held back if the ring is round the neck and traction by craniotomy forceps only moves the uterus as a whole. Cleidotomy is, there-

fore, indicated in every case where the ring is round the neck of a dead child. Cesarean section is indicated where the ring is wholly below a living child. In other cases, if simple traction or manual dilatation fails, it is preferable to embryotomy if the child is alive. In performing the operation it is often difficult to extract the child. Thus all extraperitoneal Cesarean sections are contraindicated, and in septic cases the operations indicated are Cesarean section followed by hysterectomy if the child is alive, or excision of the gravid uterus unopened if the child is dead.

One Thousand Cases of Syphilis Treated with Salvarsan.—Kilroy, in *The London Medical Lancet*, states that 2147 injections were given to 1000 cases—the first injection on August 16, 1911, and the last on November 8, 1912. No deaths have occurred. Seventeen cases received only one injection; 865 cases received two injections; 75, three injections; 40, four injections; and 3, five injections. There were three cases of pain, stiffness, and swelling of the arm, causing some loss of service, but no permanent damage. In one of the cases quite recently he felt confident that he injected 250 Cc. of the solution into the space between the vein and its sheath. The reactions were on the whole very mild—twice a temperature of 104.8° F. The great majority showed no rise of temperature. A few reactions were delayed to the next day. No reactions occurred on the day of injection. Herxheimer reactions were not very common, and it was difficult to separate them from arsenic rashes. He could not satisfy himself that they were more common in one particular type of case than in another, except that possibly florid early secondary cases provide them in greatest numbers. Very fibrous non-vascular tissues are resistant. Florid secondary syphilis gives the most dramatic results. There were three cases of pain, stiffness, and swelling of the arm, causing more loss of service, but no permanent damage.

Occasionally resistant ulcerations (particularly those of the pharynx) are met which improve up to a certain point, and then cease to improve, only to yield to vaccine. At times, even though the polymorphous rash of the syphilitic disease disappeared promptly there persisted patches of eczema or infections of other types, which later cleared up under vaccine.

The needle used was of tantalum fixed in a modified McDonagh's holder, this being harder than steel or platino-iridium, not rusting, nor expensive. As to pace it is stated that one operator can deal with 12 cases an hour provided he has very skilled

assistants. He has equaled 21 injections in $1\frac{1}{2}$ hours. About 50 per cent. of the cases examined after having had salvarsan gave a negative Wassermann.

Of the 2147 injections given to 1000 cases with 13 invalidings, there were no deaths, and 22 clinical relapses readmitted to Kilroy's hospital, two clinical relapses admitted to other naval hospitals, and two occurring in ships. Of 901 cases receiving two injections, 21 cases reached the hospital as relapses, two were known to have recurred in ships, and two have been treated in other naval hospitals.

Of 68 cases receiving three injections, one case reached the hospital as a clinical relapse.

In 14 cases receiving four injections, no case reached the hospital as a clinical relapse.

Adherent Pericardium.—Pitt (*London Practitioner*) remarks that in most cases there is sufficient evidence to form a correct diagnosis of this condition. While adhesions are always the sequel to acute pericarditis, every case of acute pericarditis is not necessarily followed by adhesions. There are three types of cases: (1) Latent. The heart may be of normal size; the adhesions are only found accidentally post mortem. In all these cases, however, there has been no external pleuro pericarditis. (2) Cases with cardiac symptoms. Adherent pericardium may be suspected, when within a few months of acute rheumatism, there is much more cardiac failure than can be accounted for by the valvular lesions present. Mitral disease rarely displaces the apex beat below the fifth space. If the apex beat is displaced to the sixth or seventh space, if aortic disease can be excluded, adherent pericardium is strongly suggested. Other signs are. Immobility of the epigastrium; absence of variation of the cardiac impulse with change of position. Occasional signs are: Pulsus paradoxus, cardiac impulse in the ninth and tenth left spaces just outside the posterior part of the axilla, marked cutaneous tenderness, ascites without cirrhosis of the liver, generally also with cyanosis, and tenderness over the phrenic nerve. (3) Cases with ascites and cyanosis without any obvious valvular heart lesion. The history may not reveal previous pericarditis. Dyspnoea is often intense. Occasionally, the liver becomes greatly enlarged owing to the failure of the diaphragm to act. Treatment is prophylactic. The operation of cardiolysis aids in taking the strain off the heart, and in some cases the permanent benefit to the patient has been most marked.

Fulminating Pneumonia.--Glynn (Quar. J. of Medicine) records notes of four cases of fulminating pneumonia occurring in a public institution, and draws the following conclusions: (1) Fifteen cases of a typical pneumonia occurred during two mild epidemics in a public institution in Liverpool; in seven the pneumococci were looked for and demonstrated. (2) The four fatal cases were of fulminating type, two deaths occurring in about seven hours, and two about thirty hours after the first symptoms. (3) The two boys dying in about seven hours showed, apart from congestion, no macroscopic, and so little microscopic evidence of pneumonia, that but for the demonstration of the pneumococci in the lung alveoli, the cause of death would not have been discovered. (4) In both the infection was primarily a respiratory one, involving the lung tissue, and had hardly developed into a pneumococcal septicæmia. (5) In both, the organisms had produced profound degeneration of the kidneys, thrombosis and hæmolytic in the vessels of the lungs and kidneys, and the deposition of blood pigment not only in the liver and kidney tissue and in the thrombi, but also in some of the leucocytes in vessels in which thrombosis had apparently not occurred. (6) In the two boys dying after about thirty hours' illness, consolidation was evidently beginning in the lungs of one while those of the other contained a small patch of pseudo-lobe pneumonia. Pneumococci were demonstrated in both instances. Clinically all the cases were rather atypical on account of the prominence of gastro-intestinal or cerebral symptoms, and the small amount or absence of consolidation. (7) There is not sufficient evidence to determine whether the atypical nature of the infections were due to some unusual character of the pneumococci as suggested by the thrombotic and hæmolytic effects which occurred in two cases, or to some predisposition on the part of the patient, perhaps, of the nature of status lymphaticus.

Treatment of Gonococcal Urethritis.--

Likes and Schoenrich (Urologic and Cutaneous Review) refer to the fact that while anterior gonorrhea may at times run an obstinate course, it is by no means as troublesome as the complications likely to occur when the posterior urethra has become involved. In anterior cases it should be the aim to avoid the spread of the infection to the posterior urethra.

To this end the authors have devised a simple apparatus, consisting of a moveable upright rod or prop and a platform with an horizontal extension provided with notches, the latter regulating the height of the prop

to suit patients of different stature. The patient stands on the platform, with his back turned to the prop and notched extension, and places the prop, which is provided with a V-shaped padded crotch above, in such a position that upward pressure is made upon the perineum just anterior to the anus, thus occluding the membranous portion of the urethra and shutting off communication with the posterior canal. With the fingers closing the meatus, any injection fluid introduced is thus in a closed tube and can easily be retained for an indefinite period. The anterior urethra will be distended and penetration of the fluid into the follicles and glands favored, thus affording it a real opportunity to destroy the deep lying gonococci. The authors believe after many years' experience with this device, that it hastens the cure of anterior urethritis and thus in many cases prevents extension of the process to the posterior urethra.

Gestation in stump of a Tubal Gestation Sac.--

Benzel (Beitr. z. Geburtsh. u. Gynak.) operated in May, 1906, on a patient, aged 30, who in October, 1905, had undergone the removal of gestation sac in the right Fallopian tube. Convalescence was speedy on that occasion. Before the second operation symptoms of ectopic gestation on the right side, and anterior hæmatocoele developed. This diagnosis proved correct. The left tube and ovary were healthy, but a blood tumour lay seated on the right cornu of the uterus. The tumour and the adjacent tissues of the cornu were dissected and the left tube was amputated in order to sterilize the patient. The tumour proved to be a tubal sac. The uterine portion of the tubal canal bore normal epithelium, but towards the ovule or its relics this epithelium was replaced by an area of effused blood in the midst of which chorionic villi were detected. Benzel believes that the tubal canal in the ligatured stump regained its permeability. He quotes two instances of gestation in the stump of an amputated tube, but in both cases the tube had been excised for suppurative disease not ectopic pregnancy. Fraenkel has shown that neither simple nor even double ligature of the tube can ensure permanent occlusion of its canal.—British Medical Journal, December, 1912.

"Solution of Albuminate of Iron" (Liquor Ferri Albuminatis, Flexner.) Contains 13% Alcohol. Each teaspoonful of this preparation represents one gram of Dry Albuminate of Iron in permanent solution. A most valuable form of iron tonic. Prepared by Robinson-Pettet Co., incorporated, Louisville, Ky.

Death by Electric Currents and by Lightning.—Jex-Blake (*British Medical Journal*) has this to say as to treatment:

In spite of all the experimental work that has been done on the electrocution of the lower animals, the treatment of persons apparently killed by electric currents remains much where Priestly left in 1767. He tried artificial respiration, and artificial respiration is still the most successful treatment available. It is best carried out by the prone-pressure method of Schafer, because it is the simplest and the least dangerous in the hands of the inexpert; by some authorities Sylvester's method, in which the victim is placed on his back, and not on his stomach, is preferred (Brauchbar). The French generally recommend that rhythmical traction of the tongue should be performed at the same time, as was first recommended by Laborde (1894). This, however, could not be done easily with the patient in the prone position. Gibbons recommends the use of a special form of bellows. Atropine, recommended by Eggleston, has not proved of much service. The importance of getting to work with the artificial respiration without a moment's delay has often been emphasized by those who had had much experience of electrical accidents. No less important is the necessity for continuing artificial respiration until it is certain that death has occurred; nothing less than cooling of the body or the onset of rigor mortis should be considered to be evidence of death here.

Recovery after two hours of apparent death is mentioned by d'Arsonval (1910), who gives a first-rate account of the steps that should be taken in rescuing and resuscitating the victims of electric shocks. It must be remembered that the great majority of electrical accidents take place in workshops and other places where immediate skilled assistance is very rarely available, so that any but the simplest of treatments could not, practically speaking, be employed.

It is worth while to mention two other possible methods of treatment. It has been said that in most cases death by electric shock is due to cardiac failure, the heart being thrown into fibrillary contraction. Prevost and Battelli, and others after them, have shown that the fibrillating hearts of the lower animals can be made to beat regularly and rhythmically once more by passing strong electric currents through them within a given time—a few minutes; so that the apparently dead animal is brought to life again. It is more than probable that the same treatment—a hair of the dog that bit them—could be applied with success to human beings apparently killed by electric currents, but there are two practical diffi-

culties here. In the first place there is no experimental evidence in the case of man to show what voltage and what strength of current should best be employed in this method of resuscitation. In the second place there would usually be great difficulty in providing the current at the required voltage for use on the spot and within a few minutes. Still, this method is well worth investigation and trial.

The second mode of treatment Jex-Blake mentions is that tried, though without success, by Stanton and Krida. These authors started out from the work of Crile and Dolly on the resuscitation of animals killed by chloroform and by asphyxia, which showed that recovery after apparent death was possible if the pressure in the coronary arteries could be raised sufficiently to restore some sort of circulation through the substance of the heart. If this was done mechanical stimulation of the heart through the chest wall would then cause it to beat vigorously again, and the animal seemingly killed by chloroform, or asphyxia, as the case might be, would be brought back to life. Stanton and Krida tried this method of resuscitation on dogs subjected to the ventricular fibrillation caused by electric currents of low voltage, but it did not prove successful.

The Intravenous Administration of Neosalvarsan in Syphilis.—Nixon (*Bristol Medico-Chirurgical Journal*) says patients do not, as a rule, experience any unpleasant effects either during or after the injection. Some complain of a slight metallic taste at the end of the injection, but it is quite transitory. Occasionally a slight headache comes on two or three hours afterward, and Nixon finds a cup of tea is the best remedy.

It is advisable to prepare the patients as if for an anesthetic by administering an aperient on the previous night, and giving a very light breakfast on the morning of the injection. Ordinary meals may be taken after the injection. The patients should remain at rest, preferably in bed, for two hours; if at the end of that time no unpleasant symptoms have occurred, he allows them to get up, provided they remain quiet. The first injection requires greater caution than subsequent ones so far as after-treatment is concerned. If the patients stand the first injection well he allows them to get up and go out and about within a few hours after subsequent injections.

The dosage he employs is 0.75 gramme (No. V) for a first injection in a healthy man, with subsequent injections of 0.9 gramme (No. VI) at intervals of three days

(in practice two injections per week) until four or five injections have been given. The Wassermann reaction in an early case of syphilis is usually positive up to four injections; if it is negative a week after the fifth injection he does not repeat dose unless a later test shows a positive reaction again. If after the fifth injection the reaction is not negative, he gives a sixth or seventh injection, with intervals of a week, taking a Wassermann test a week after each injection, and being guided as to a repetition of the dose by its results. He discontinues mercury for at least a fortnight before the Wassermann test is made, but afterwards combines the treatments. Before finally deciding that no further neosalvarsan is necessary he makes a final Wassermann test, preceded by a fortnight without mercury.

Neosalvarsan is apparently contraindicated in alcoholic debilitated subjects, or in those suffering from cirrhosis of the liver. He makes it a rule to examine the urine beforehand, ascertaining with particular care that the quantity secreted is normal, that the specific gravity is within healthy limit, and above all that the excretion of urea is sufficient.

A trace of albumin may depend upon the syphilitic infection, but the presence of casts or sugar should in the present state of our knowledge deter us from administering any of the arsenic compounds intravenously. In cases showing signs of any syphilitic involvement of the central nervous system, especially meningitis, spinal symptoms, psychoses, or optic neuritis, great caution should be exercised, and if neosalvarsan is administered at all, the dosage should be very small at the outset.

Observing these precautions, neosalvarsan offers a very valuable adjunct to the mercurial treatment of syphilis. The patient's infectivity is quickly minimized if not abolished, the visible signs of syphilis are speedily dispersed—e.g., the chancre, roseola, and condylomata may disappear after the second injection. The symptoms are alleviated, and the Wassermann reaction changed from positive to negative, whatever this may really mean.

Time alone can demonstrate whether more solid advantages accrue, but alleviation to this extent is a gain not likely to be regarded. At least, neosalvarsan offers the advantages aforesaid, as well as marked benefits in later manifestations, particularly tertiary lesions of the skin and mucous membranes. Some cases of locomotor ataxia and late nervous disorders have been improved.

In addition to these considerations it may be observed that neosalvarsan if cautiously

prepared and administered shows little or no toxicity, that it is easily dissolved, requires no elaborate apparatus, and is injected at room temperature, while the use of redistilled water has proved the "reaction" after intravenous injections to depend more upon some ill-understood quality of the water than upon the drug employed.

Abdominal Pain in Infants.—Pritchard, in *The London Lancet*, says that an infant cries for other reasons than because it is in pain. Crying is a protective reflex. A baby cries in the first instance because by so doing it benefits itself—for example, by expanding the lungs, attracting attention, or obtaining oxygen. The cry, however, may soon become a habit, and may continue long after it has ceased to confer any advantage. It is most important to be able to differentiate between the cry which is really due to pain and the cry which is due to habit, or which is the emotional concomitant of a compound reflex. If we can exclude habit, general nervous excitability, dentition, ear trouble, and obvious external causes of irritation, such as pins, wet napkins, and creases in the clothing, as causes of crying, we shall be justified in suspecting that the source of the pain is localized in the abdomen, by far the commonest seat of pain in infants under six months of age. In quite young infants there is little to distinguish the pain due to abdominal disturbance from pain due to other causes. In this, as in other painful conditions, the legs will be drawn up, the arms flexed, and the hands probably clenched: the recti abdominales will be tense and the abdomen hard. There may be areas of hyperesthesia, but they are difficult to locate, as the infant may be more or less tender all over. With abdominal pain, however, the baby usually appears to be comforted by gently rubbing the abdomen or when laid face downward on a pillow. Heat applied to the abdomen usually gives relief. The causes of abdominal pain in their approximate order of frequency are as follows: 1. Dysperistalsis of the intestines, including enterospasm caused by irritation, obstruction, or nervous incoordination. 2. Disturbances of the motor functions of the stomach, including pyloric spasm, hour-glass contraction, spasm of the cardiac sphincter from wind, food, or other causes. 3. Incoordination of the motor functions of the bladder, spasm of the sphincter vesicæ, etc. 4. Referred pain from the thoracic cavity, pneumonia, pleurisy, empyema, etc. 5. Renal colic. 6. Spinal caries and osteomyelitis. 7. Peritonitis, appendicitis, etc. Dysperistalsis, or incoordinated contraction of the bowel

musculature, is by far the most common common cause of abdominal pain in infants. Nature has provided in meconium a highly suitable material on which the bowel may practice its tyro efforts. In order that the musculature of the bowel may be excited to contract and perform its functions of peristalsis it is necessary that an adequate stimulus should be applied, neither too strong nor too weak, and this is of special importance during the first two or three days of life when habits are formed. Meconium supplies exactly the right sort of stimulus. It lubricates the mucous membrane and is sufficiently solid to form a very satisfactory motion, until such time as it is replaced by the ordinary constituents of an infant's stool. It is a very frequent practice to sweep this valuable educational medium out of the bowel by a generous dose of castor oil. There can be no more irrational procedure. The castor oil is too strong a stimulus; it excites active peristalsis, and it deprives the bowel of the didactic material which should last it for several days. The after-effects of this initial over stimulation are reactionary fatigue and constipation, so that perhaps more doses of the purgative are administered before the incoming milk can supply the basis of a natural stool. In this way the natural rhythm and periodicity of the peristaltic function is interfered with from the very first, and the normal function is only subsequently established with much pain and crying on the part of the infant.

Ectopy of the Testicle in the Child.—

Savariaud (Jour. de med. de Paris) says that in operations for the replacement of an ectopic testicle there is great variation in results as far as esthetic considerations are concerned. The usefulness of the organ after operation is very doubtful. When these organs are not descended they are generally undeveloped, and usually will not functionate if replaced. The question is whether this operation is indicated or not. When this deformity is bilateral there is generally infantilism, with physical and mental debility. Here operation gives poor results. In general the testicle is of small size and accompanied by a hernial sac. The epididymis is more or less separated from the gland, and there is a prolongation of the vaginal membrane surrounded by red connective tissue fibers. Microscopic examination of these testicles shows little normal tissue. While at puberty the normal testicle undergoes an entire change in structure, in the ectopic testicle the structure remains infantile. The object in doing this operation is to avoid complications such as pain in connection with injuries in sports,

torsion of the testicle, strangulation at the inguinal ring, cancerous degeneration, inflammation propagated to the peritoneum, presence of a hernia difficult to retain. The accompanying hernia is the chief indication for this operation. Degeneration is rare. The organ might be removed if the individual were not a neuropath and were willing. But if he believes that he will become unsexed it is better not to remove the testicle, but to draw it down and replace it in as normal a position as possible for the mental effect on the patient. When the testicle is not high up daily traction on the cord will often cause it to descend with growth. The best age for operation is between the sixth and twelfth years.

Sugar as a Heart Tonic.—Goulston, in The British Medical Journal, says that Sir James Sawyer gives very favorable reports regarding the effects of cane sugar in cases of dilatation of the heart in the aged. Sir James Sawyer has also prescribed sugar in wasting disorders, some forms of anemia, adynamic rheumatism, and the neurasthenia of neuritic subjects with such excellent results as increase of weight, power, strength, and vigor, without the production of sudden excitement. The patient is advised to carry with him about half a pound of lump sugar daily and eat it from time to time except just before meal. Sir James concludes his paper by saying that henceforth we must think of members of the sugar group as sustainers and developers of the heart musculature in failure of compensation and in a large variety of cardiovascular troubles. He advises obstetricians to prescribe it in cases of uterine atony and as a general tonic and food throughout pregnancy. Pure cane sugar should be used, a simple test for which is its luminosity when two lumps are rubbed together in the dark.

Pernicious Vomiting of Pregnancy. —

According to Williams (Jour. Obst. and Gyn. Brit. Emp.) the underlying fact in all cases of vomiting of pregnancy is probably an imperfect reaction on the part of the mother to the growing ovum. In most cases this is only a predisposing cause, while a reflex or neurotic influence is the exciting factor, and cure usually follows its removal. The writer holds to the classification of reflex, neurotic and toxicemic vomiting. Of these the neurotic is the most and the reflex the least frequent type, while the toxicemic is the most serious. Pronounced toxicemic vomiting is accompanied by characteristic lesions and profound changes in metabolism. The significance of a high ammonia coefficient is not specific. It may be a manifestation of toxicemic vomiting, of starvation

following neurotic vomiting, or of an acidosis due to various causes. It should be regarded merely as a danger signal, while the differentiation between the various types is possible only after careful clinical observation. If improvement does not promptly follow appropriate treatment, the existence of toxic vomiting should be assumed and abortion promptly induced. In the absence of genital lesions, a low ammonia coefficient indicates neurotic vomiting, which can be cured by suggestion and dietetic treatment, no matter how ill the patient may appear. In primiparous women vaginal hysterotomy is the most conservative method of emptying the uterus. Nitrous oxide gas or ether should be used in preference to chloroform for anesthesia.

The Diagnosis of the Status Thymolymphaticus.—Schridde (Munch. med. Woch.) draws attention to the importance of this condition, which is so frequently found in cases of sudden death amongst children in which no other cause of death is apparently present. The writer mentions the following appearances as characteristic of the condition: Above all the characteristic pallor of the delicate skin is striking, while there is usually a well-marked development of subcutaneous fat of a pale yellow color and unusual moistness. The thymus gland is more or less enlarged, and there is associated a general hyperplasia of the lymphatic parenchyma. The Malpighian corpuscles of the spleen as well as the spleen itself sometimes are enlarged. There is frequently a remarkable hyperplasia of the lymphatic tissue in the stomach and intestines, while the papillae at the base of the tongue and the tonsils of the throat and pharynx are enlarged. The mesenteric glands are increased in size, and not infrequently in places where no true lymphatic tissue is present lymphatic nodules are developed, as, for example, in the mucous membrane of the trachea and vagina, in the connective tissue of the liver, kidneys, the skin, and in the bone marrow. Lastly, there is found in true cases more or less well-developed dilatation and hypertrophy of the left ventricle of the heart. The appearances may not be well marked or characteristic in certain cases, and in them only a microscopic examination of the tissues will enable a diagnosis to be made.

He regards hyperplasia of the medulla of the thymus gland as a special and characteristic condition of the disease, and suggests that owing to a failure to recognize this fact many investigators have described the thymus gland in cases as normal. During life, he states, a certain criterion of the status thymo-lymphaticus is to be found in

the constant presence of hyperplasia of the glands at the base and sides of the tongue.

The Estimation of the Length of Pregnancy.—Schottlaender (Zentralbl. f. Gyn.) has attempted to determine the length of the pregnancy by a histological examination of the placenta. The material examined was divided into three groups corresponding approximately to the three trimesters of pregnancy and the results were compared with data obtained by careful measurements of the fetus. In examining early placenta the presence of nucleated red cells in the vessels of the villi and chorionic membranes can be definitely established before the twelfth week. A number of other distinctive differences in the character of the villi also exist in subsequent months of pregnancy although from the sixth to the tenth month no practical histological criteria could be established. It is necessary to rely on a collective diagnosis rather than on any histological features in the placenta.

Epilepsy.—De Fleury (Journ. des praticiens) says that in all cases of epilepsy a meningo-encephalitis is already in existence. In some cases the lesion is both the predisposing and the immediate exciting cause of the attacks; these are the bad cases, in which treatment is unavailing. In the majority, however, the lesion only causes a predisposition to the paroxysm—the patient is a potential epileptic only.

He quotes some interesting experiments of Claude and Lejonne, in which a subdural injection of zinc chloride set up a condition of meningo-encephalitis affecting the motor area. After some months' respite and apparent cure, the animals were given small doses of strychnine in their food. This was followed by epileptoid crises. Control animals, which had no previous meningeal irritation, were in no way affected. The author goes on to say that the result of these experiments are in every way comparable to the pathology of the condition in the human being. Meningo-encephalitis may develop in intrauterine life, followed by convulsive attacks in infancy. These disappear, leaving no apparent trace behind, but towards the eighth to the twelfth years, very often as the result of peripheral irritations, such as digestive troubles, true epileptic troubles begin. Most authorities have noted in the preconvulsive period furred tongue, fetid breath and constipation alternating with offensive stools, and certain monographs have described a gastro-intestinal epilepsy—this being, according to the author, an improper title.

After reviewing the various exciting causes suggested by different authorities,

the author states his belief that Herter's views of excessive intestinal putrefaction, as betrayed by indicanuria, appears the most reasonable exciting cause. He refers to a number of cases, some of them very obstinate, in which a vegetarian dietary combined with one of the lactic acid preparations gave very striking results. The regimen recommended is strictly vegetable, suppressing all food of animal origin. Milk and eggs are particularly undesirable. If the patient has passed some months without an attack, he is allowed a little red meat, well cooked and carefully masticated, at the midday meal. Beverages of a diuretic character especially may be given freely between meals, a litre being sufficient during the day. Any large quantity might prove harmful by raising the blood pressure. Preparations of lactic acid are given in the form of bouillon, the most acid preparations being the most active.

In his views, the great majority of cases, excluding those of Jacksonian origin, have as a determining cause or the convulsions an organic poison of intestinal origin. The results of this treatment have proved this. He does not agree with those who think that the convulsive poison is an auto cytotoxin.

Glycosuria in Tuberculous Meningitis.

—Frew and Garrod, in *The London Lancet*, say that examination of forty-one cases of tuberculous meningitis showed the presence of glucose in the urine in fifteen, or 36.6 per cent. of the cases. In eleven of the remaining twenty-six cases a partial reduction of Fehling's solution was obtained at the same period of the disease as the reduction was obtained in the fifteen positive cases. The diagnosis was confirmed by autopsy in thirty-eight cases, and in the remaining three tubercle bacilli was found in the urine.

Clinically, the cases with glycosuria presented little difference from those without. In the great majority of cases it appeared in the last forty-eight hours of life. There was nothing found in the cases examined postmortem to indicate the exact cause of the glycosuria.

Pituitary Medication.—Lagane (*La Presse Medicale*) says that the good effects of pituitary extract are seen usually during the first few days of its use, are lost if it be prolonged, and often cease with its stoppage. Infundibulin stimulates the unstriated muscle of the dilator iridis, of the bladder, uterus, gallbladder, and intestine. Experimentally, pituitary extract causes hyperadrenalism; in very large doses, hypothyroidism and thyroid atrophy; it also ex-

cites the secretion of the pituitary itself; it banishes the tetany that follows parathyroidectomy. Castration in both sexes causes pituitary hypertrophy; so, also, does extirpation of the adrenals. Therapeutically, pituitary extract has usually done good in increasing the force of the heart muscle, raising arterial tension, provoking diuresis, and improving appetite. It has done good in the following conditions: the hyperthyroidism of pregnancy, menstruation, and the menopause, the tachycardia and tremor of Graves' disease, but not its exophthalmos; if given with extract of ovary or testis and thyroid, it has sometimes been useful in genital insufficiency and myxoedema and in hypo adrenalism (it is contraindicated in hyper-adrenalism and arterial tension); it relieves some symptoms of paralysis agitans, but not its rigidity; combined with ovarian extract, it was useful in two cases of myasthenia gravis; it has occasionally diminished the aprosopia of adenoids, even without operation. Lagane gives a daily dose to adults of 10 to 30 or 50 centigrammes of the dry whole-gland extract of ox, calf, or pig, or 10 to 40 of the infundibular extract; to a child, one third or fourth of the adult dose, according to its age. He gives cachets of 10 c.g., preferably during meals. For obstetric use, he injects 1 to 4 cubic centimetres into the glutei muscles. Thacon advises avoidance of pituitary extract if the kidneys be not normal, and Cushing reminds us that the extract contains a depressor substance as well as a pressor, but Lagane says that Renon and Delille, and others who have used it extensively, have never seen any bad results. Lagane finds it useful during convalescence from acute infective diseases. He makes no reference to the galactagogue effect of infundibulin, which was discovered by Ott and Scott in 1910, and confirmed by Schafer and Mackenzie in 1911.

Inhalations of Hot Air in the Treatment of Diphtheria.—Rendu (*Lyon Medical*) reports a series of cases of diphtheria in which the throat lesions were treated by heated air, applied by means of a tube. In his view such inhalations cause an immediate relief to the sore throat, exercising a

sort of analgesic action. The hyperæmia which follows may also be of value, as may the increase in glandular secretion which appears to be excited. But the principal action he regards as a bactericidal one, and he suggests that, if the bacilli are not actually destroyed, their virulence and power of producing toxin is very much diminished. Rendu disclaims any idea of substituting this method of treatment for the use of serum, but considers that the two

methods can very well be carried out together. Nevertheless to test the value of the hot air he treated two series of cases, one, as usual, with serum, and the other by his new method, and found very little difference in the results. He tabulates in his paper the main features of the cases composing each series, and points out that, so far as severity of type is concerned, there is little to choose between the two groups. The air, heated in a contrivance analogous to the electric drying apparatus of hair-dressers, was administered through a flexible metallic tube, the nozzle passed into the mouth and suitably protected. The temperature attained ranges up to 110° C. The heated air may be given as long as tolerated, and then intermitted for a minute or two, and a seance lasts about 5 minutes. The average patient had 4 or 5 seances in the first three or four days. The hot air appeared to cause the disappearance of membrane at least as rapidly as did serum. The fever on an average was only slightly more prolonged. One patient, however, admitted free from laryngeal symptoms, developed croup subsequent to the commencement of hot-air treatment, while, as we would have confidently predicted, no such accident occurred in the serum-treated group. With this exception there is very little difference in the results of the two series of cases, each of which included 33 patients, the serum series having only a slight advantage in the case mortality—24.24 per cent. as against 27.27 per cent. The deaths, however, appear in many instances to have been due to broncho-pneumonia and not to uncomplicated diphtheria; there were no cardiac deaths for instance, and the palate was the only situation in which paralysis manifested itself. Many of the patients, moreover, appear to have contracted measles, and this in reality was the cause of death. One is tempted to conclude that if a similar experiment was repeated in cases of uncomplicated diphtheria of a somewhat more severe type, the patients treated by hot air alone would not compare so favorably with serum-treated cases. It is also a little difficult to see how a temperature great enough to destroy or limit the activities of the bacilli could be tolerated sufficiently long by the patient. Rendu tells us that children of from 4 to 8 years in a seance of 5 minutes inhale air at from 20° to 60° C. for 2 minutes, 70° for 20 seconds, 90° for 15 seconds, 100° for 10 seconds, and 110° for 5 seconds, older children being of course more tolerant. This does not seem to expose the germs in the membrane to a high temperature for long enough to modify them effectively. Rendu's paper is none the less very interesting, although we hardly think

he will find many imitators. He suggests that, as a substitute for serum treatment, his method might fairly be indicated in tubercular subjects, in patients who have previously had a dose of serum and in whom anaphylaxis is dreaded, and in patients who have just had another infectious disease such as measles, as in the last-named circumstances serum is often very disappointing.—Edinburgh Med. Journ.

Manifestations of a Healthy Heart.—

Thorne (British Medical Journal) says that as regards the etiology of these cases, careful investigation, especially when it can be carried back to the early stage of life, lights on some form of autotoxis. The most common is that of gastrointestinal origin. In other subjects a rheumatic or gouty taint seems to bear a causative relation to the syndrome. Not a few subjects bear the rachitic stamp in the form of beaded ribs, retraction of the lower part of the sternum, or a tendency to pigeon-breast. But whatever the cause the result is a general impairment of power and efficiency, and a consequently diminished ability to bear strain, whether mental or physical. Such are the children and adolescents who become the subjects of the strain usually attributed to athleticism. Sound and healthy lads do not strain their hearts in ordinary and legitimate forms of game and sport, but those under consideration, short of wind, subject to palpitation and tumultuous action on exertion, and lacking in staying power, albeit full of pluck and will-energy, may meet misfortune in a football match, a paperchase, a boat-race, or a game of rackets (Thorne quotes cases within his knowledge). Even if they escape some form of breakdown, they plod on with something less than normal energy which may suffice to meet the requirements of a routine life; but they live on a lower plane is their due. In manhood some are invalidated because they are unable to bear the strain of an active life at home or abroad, especially under the influence of a subtropic and humid climate. Others fail in route marching or break down in maneuvers, having perserved in opposition to their instincts and judgment, under the influence of assurances that there is nothing organically wrong with them, and that their monitory symptoms and their misgivings are "all nerves." As they enter on or pass beyond middle life, the atrophied tunica media and the weakened myocardium being unable to accomplish the treble task of emptying the chambers of the heart, filling the aorta, and then driving the blood through the peripheral vessels, these subjects begin to experience the troubles and disabilities gener-

ally referred to as indicative of arteriosclerosis, but, as Thorne would prefer to call it, atrophic dilatation as opposed to the hypertrophy to which the late Dr. Savill gave the name of "arterial hypermyotrophy."

The treatment to be adopted consists primarily in the correction of autotoxis, whether gastrointestinal, rheumatic, gouty, or due to some pyogenic process. The greatest attention should be paid to diet and general hygiene, exercise being regulated in accordance with the response which may be expected from the circulatory mechanism. Baths and exercises administered according to the Schott-Nauheim method are of great value. Among pharmaceutical remedies, iron is not indicated; digitalis is sometimes useful, but adrenalin, administered by the mouth in doses of from 5 to 10 minims of the hydrochloride solution, stands pre-eminent. Its special office is to bring the tunica media into action, and, it would seem, to restore it to functional efficiency. Thorne has employed it for years, and in every case made frequent manometric observations, which enable him to give unqualified denial to the prevailing suspicion that, thus administered, it raises blood pressure.

It is necessary to add that, during the period of growth and development, progress in the more marked cases is generally slow, and relapse the not uncommon penalty of undue and especially of sustained exertion.

Such in brief are the reasons why he regards it as a misfortune were it accepted that functional murmurs and irregularities of pulse frequency are manifestations of a healthy heart, and as such to be regarded with complacent acquiescence.

New Method of Hemostasis.—Fonio (Wiener klin. Wochenschrift) describes a new method of hemostasis, based upon observations showing that in cerebral operations bleeding could be promptly arrested by the application of pieces of fresh muscle. He succeeded in preparing from the blood platelets a solution of a substance named coaffulin, which was found to accelerate and increase coagulation when brought in contact with the bleeding vessel. By its use it was found possible to obtain effective hemostasis without ligatures and to prevent secondary hemorrhage. Moreover, healing of the wound seemed to take place more rapidly than ordinarily. This method proved of particular advantage in certain operations accompanied with profuse hemorrhage, as in laminectomy and trephining. The mode of application was as follows: In herniotomies, appendectomies, and laparotomies all bleeding vessels were first

grasped with clamps, so as to avoid delay. Instead of ligation, after a clamp had been removed, a little coagulin was poured over the place which had been in its grasp. Small arterial hemorrhages ceased permanently and larger ones after compression for a short time with the finger in order to facilitate thrombosis. Before closure of the wound it was found advisable to pour a little coagulin over its surface in order to prevent secondary hemorrhage. In strumectomies any hemorrhage from the skin, fascia and muscles was managed in the same manner. In operations upon bone attended with profuse hemorrhage, in order to increase coagulation, the blood was wiped away and coagulin quickly applied to the bleeding area, after which slight compression was often made with a gauze tampon until sufficient thrombus formation had occurred. If necessary, this procedure was repeated, and the wound could then be closed without drainage. Arteries of medium caliber must be compressed with the finger a sufficient time so that the thrombus will adhere firmly and will not be dislodged by the blood current.

Treatment of Insomnia and Nervous Conditions.

—Eulenberg (Med. Klin.) investigated the hypnotic action of adalin in 29 cases. In the majority there was quite severe and obstinate insomnia accompanying chronic neuroses and psychoneuroses, such as neurasthenia, nervous depression, anxiety neuroses, hysteria, traumatic neuroses, as well as depressive psychical affections, involution melancholia, beginning arteriosclerotic dementia, etc.; furthermore, insomnia associated with circulatory disorders, as in Basedow's disease, cardiac insufficiency, and arteriosclerosis. In all these conditions it proved completely satisfactory if given in a full dose (1.0 gm.), one-half to one hour before retiring, with a warm drink. Even patients who had taken other hypnotics, such as veronal and veronal-sodium, etc., expressed themselves satisfied with the remedy. In a single instance some nausea was observed after its administration to a hysterical patient; otherwise no unpleasant by- or after-effects were ever noted even after continued use for 8 or 10 days. Eulenberg therefore, regards adalin as an agreeable, quite rapid and reliable hypnotic in mild and moderate forms of insomnia. As a sedative, particularly in conditions of anxiety with psychical depression and in cardiac neuroses, it was usually given in doses of 0.25 to 0.3 gm. (+ to 5 gr.), 3 to 4 times daily.

Intussusception.—Souttar (Brit. Med. Jour.) finds that the condition appears most commonly in children which are well

nourished and in perfect health. The onset is sudden; and as a rule the condition starts with a severe and sudden abdominal pain; which comes on in attacks with intervals of complete relief. Vomiting, as a rule, is not a prominent symptom at this stage. Tenesmus is a marked feature, the child straining incessantly, but only passing a little blood and slime. At first there may be a motion or two, but after this obstruction becomes complete and no trace of bile will be found in the stool. This sign is almost infallible, and should be a part of the routine examination. Blood and mucus are exuded from the intussusception in sufficient quantity to soon clear the lower bowel of its contents, in view of the violent peristalsis which is occurring. In a typical case the abdomen is fairly lax, unless the child is straining. A tumor may be felt in the course of the colon. This tumor is in the region of the transverse or descending colon. It gradually shifts its position, advancing along the colon and increasing in extent. It is sausage shaped and of a horse-form, the concavity being toward the center of the abdomen. Manipulation causes it to contract and become hard. The hardening is accompanied by an attack of pain and an increase of tenesmus. It is characteristic that although the tumor may not be very tender and manipulation may cause no instant pain, the pain rapidly follows and continues long after manipulation has ceased. The presence of a tumor is the essential sign of intussusception. The apex of the tumor may be felt by the rectum.

He found that in 70 per cent. of the cases a definite cause could be found: they tend to be chronic; the symptoms are irregular. Eliot and Corscaden in an extensive series of cases found the following direct causes: (1) Tumors were found in 40 per cent. of the cases. Of these 24 per cent. were innocent. (2) Ulcers were found in 14 per cent. and were due to typhoid fever, dysentery and tuberculosis. (3) Meckel's diverticulum (inverted) was the cause in 12 per cent. (4) Trauma, such as a severe blow or a violent strain, was a definite cause in a few cases. More or less acute attacks are followed by intervals during which the patient is free from any acute symptoms and only complains of general poor health. The attacks become more frequent as time goes on, but may cover a period of from a month to a year. Pain is always a prominent symptom. Vomiting occurs in two forms. With the pain there is a bilious vomit, due to dragging on the mesentery. In the later stages there occurs the dark vomit of intestinal obstruction. Wasting and anemia are present in the chronic type. Constipation or diarrhea

may be present in chronic forms of intussusception.

Anaphylaxis.--Sacre (Arch. Med. Belges) considers the subject under the following headings:

A. Pathogeny of some phenomena of morbid or biological origin.

1. Intoxications of alimentary origin. The production of symptoms similar to those of anaphylaxis, resulting from the ingestion of milk, eggs, fish, fruit, etc., is too well known to need description.

2. Anaphylactic symptoms of serous origin. Symptoms are rare after a first injection of serum. After a second injection local and general symptoms may arise, erythema, enlarged glands, vomiting, diarrhea, fever, giving rise to the "serum krankheit." The gravity depends on various circumstances. (a) The origin of the serum. The serum of the horse is the least noxious. (b) The place of inoculation. The subcutaneous method is the least, the intra-cerebral the most dangerous. (c) The subjects re-injected. Tuberculous patients are particularly subject to serum disease. Gourraud and Carnus have noticed it in 55 per cent. of tuberculous patients treated with Marmorek's serum.

Preventive treatment of serum disease.

(a) Choice of serum. This disease is rarer in France than Germany, and French authorities recommend the serum of the Pasteur Institute, submitted for some days to a temperature of 56°.

(b) Choice of method. Intra-cerebral and intravenous injections are best avoided, and anesthesia by ether should not be employed. If the subject be known to be non-sensitized, a strong dose at once is advisable and continued for consecutive days.

Before a subcutaneous injection, 20 cc. of the serum injected into the rectum often prevents serous manifestations; others recommend CaCl_2 in daily doses of 1 to 2 grammes, and Castaigne and Carnus have employed thyroid preparations. If the patient be sensitized by a first injection, three weeks before, rectal administration as above mentioned may be employed or subcutaneous injections of $\frac{1}{2}$ cc. of serum repeated every hour for three hours may be given, and the therapeutic dose at the fourth hour.

3. Acute toxic symptoms in cases of hydatid cysts are to be considered as phenomena of anaphylaxis.

B. Diagnosis of the disease by means of anaphylaxis. This consists of the recognition of the disease by the specificity of the reaction to such and such a toxin. Two methods are employed. (a) Injection into the tissues; the cuti-reaction. (b) The injection of the serum of patients into guinea-

pigs in whom in two or three days sensibility to such and such a toxin is sought for (passive reaction of anaphylaxis).

1. Diagnosis of tuberculosis by means of the methods of von Pirquet, Calmette, and the intra-dermo reaction method of Mantoux, of glanders by mallein, of syphilis by metine are instanced by the author.

Pituglandol in Amenorrhœa.—Fromme (Zentralbl. f. Gynak.) disbelieves in local applications as a remedy for amenorrhœa when it appears, and lasts for months or longer, independent of pregnancy, or distinct pelvic disease, or phthisis. He employed the thermic uterine sound, but found it useless in these types of arrested menstruation. Seitz himself, the advocate of the thermic sound, admitted that it was useless when the fault lay with the ovaries. But it is now recognized that ductless glands carry on vicarious functions for each other. The pituitary body is known to undergo hypoplasia when the catamenia are arrested by pregnancy. Fromme therefore tried injections of pitu-glandol (Hoffmann-La Roche), after taking the greatest pains to eliminate all cases where incipient phthisis was suspected. One cubic centimetre was injected subcutaneously until the desired effect was obtained or until it was clear that the treatment was doing no good. The injection was given daily as a rule. In five out of twelve test cases the catamenial flow came on promptly; in two it appeared, but the merit of the pituglandol treatment was less evident; and lastly, in five Fromme admits that the period did not reappear, nor was there any evidence that the treatment had any effect, although some of the patients felt, or fancied that they felt, something like a molimen. Thirty cubic centimeters given daily for several weeks seemed to act harmlessly even when no menstrual flow appeared. Fromme believes that pituglandol is likely to answer in cases where young women become corpulent as the amenorrhœa develops, the fatty change being related in some way to disturbances in a ductless gland.—The British Medical Journal.

Acute Poliomyelitis.—Hellstrom (Prag. med. Woch.) gives an account of the Swedish epidemic which broke out in 1911. The majority of the patients in the hospital were children from seven weeks to eleven months old. The initial symptoms were fever, vomiting, and headache. Diarrhœa was unusual. There were several cases of difficulty in micturition requiring the catheter. Sleeplessness was a troublesome symptom in the older children and adults. Paralysis was of course the most terrible symptom.

There was extraordinary diversity in the character of the disease. Paralysis of the lower extremity was the commonest form; paralyzes of the cerebral nerves occurred, and some patients died from a hindrance to respiration either through the paralysis of the muscles or of the respiratory centre. The mortality was 20 per cent. No proof of direct contagion could be obtained in men or monkeys. The patients were kept as a rule four weeks in the hospital, and compulsory notification was ordered. Every care was taken to avoid contagion through the staff or the patients. When a case occurred in a school the whole class, including the teachers, had to remain fourteen days at home; the school-room and the books, furniture, etc., were disinfected. When circumstances allow the unaffected children, after control, should be sent away from the infected area, but visits must be forbidden.

Medical Treatment of Gall Stone Diseases.—Bain (The Practitioner, London) after discussing at great length the causes, symptoms and diagnosis of gall stone disease gives tardy attention to the subject upon which he is supposed to be writing.

In the treatment of gall stone disease the first step is to improve the digestion, for until this is done the use of drugs is of no value, this entirely aside from the general improvement in the patient and a consequent improvement in the affected organ. The principles of treatment are to improve the digestion, to foster nutritional efficiency, to disinfect the biliary passages and to correct any injurious habits.

Where there is flatulent distension of the abdomen there should be several rectal douches at a temperature of 104° F., which besides emptying the colon stimulates the musculature of the intestines. The bowels should move daily, and sulphur water, felines or even hot water before breakfast will aid in accomplishing this. The diet must be suited to the individual case, being kept within the limits of the patient's digestive powers, limiting the carbohydrates and fats, forbidding alcoholic drinks and indigestible food. Regular meals at regular hours are of greatest importance. The author believes that there may be a reflex inhibition of the pancreatic functions and therefore administers the pancreatic enzymes with nux, sodium bicarbonate and sodium sulphocarbolate.

Because of its effect on the digestion, mental tranquility is desirable and while exercise is most needful fatigue is harmful. Olive oil helps where there is hyperchlordia and tenderness over the gall bladder is helped by mustard-bran packs which may

be persisted in for several days. When the digestion has improved cachets containing cholalin and urotropin may be administered for a continued period, sometimes several months.

Chronic Renal Diseases in Childhood.

—Heubner (Jahrb. f. Kinderheilk.) says that out of 17,000 children admitted to hospital in the course of seventeen years, 73, whose ages varied from 0 to 14 years, had some form of chronic renal disease; 37 were boys, 36 girls. Forty-eight, i.e. two-thirds of the cases, occurred between the seventh and thirteenth year. Severe forms were one and a half times as frequent in boys as in girls, but renal disease secondary to pyelitis was found exclusively in girls. (1) 30 cases, 17 boys and 13 girls, were examples of "chronic hæmorrhagic nephrosis," a condition practically only met with in childhood. It differs from the chronic hæmorrhagic nephritis described by Wagner, in which hæmaturia is only a periodic phenomenon, by the constant presence of blood of greater or less amount. The quantity of urine is usually below normal. The albumin content is usually high. The sediment shows blood cells and all kinds of casts. This form is further characterized by presence of dropsical swellings. The heart may or may not be affected. The blood pressure is usually normal. Post-mortem a combination of interstitial and parenchymatous processes is found. The disease may last for years or be fatal within six months. Ten cases were subjects of the exudative diathesis, 9 had had some specific infection. (2) This group, comprising 10 boys and 6 girls, differed only from the first in the absence of hæmaturia. The pathological anatomy was that of large white kidney. The blood pressure in most cases was normal; only in a few was it raised. In some cases there was a history of infectious diseases, but in many no ætiological factor could be discovered. (3) Contracted kidney. Only 1 case of this occurred—in an idiot, aged 3 years, whose father had plumbism. (4) Chronic renal disease secondary to pyelitis. Six cases in girls only, chiefly in early childhood. *B. coli* was usually present; streptococci were found in 1 case. (5) Thirteen cases of mild nephritis, 9 of whom were girls and 4 boys. All but one child, aged three years, were above six years, and seven were between ten and twelve. Dropsy is never present. The albuminuria is almost always slight. The sediment shows hyaline and granular casts, leucocytes and sometimes red cells. Hæmaturia occasionally occurs, and is almost always associated with mild infections of other organs, especially the tonsils. The

blood pressure was always normal. The albuminuria may last for years, but Heubner has never known either form to be converted into any of the severe ones described above. Infections play an important part in the ætiology, especially scarlet fever. Treatment is ineffectual, and apart from avoiding chills and irritating articles of diet no special measures need be taken. (6) Intermittent albuminuria. Only 4 cases were met with. The ætiology and treatment are the same as in (5).

Cerebello-pontine Angle Tumor.—(Openheim (Neurologische Zentralblatt). This is a case of cerebello pontine tumor, in which the Dr. found symptoms of involvement of the motor and sensory tracts on the side of the body opposite to the tumor, i.e., motor and sensory symptoms on the same side of the body as the cranial nerve symptoms and the ataxia. This was due to the fact that the tumor had crowded the pons and medulla against the bone on the opposite side. The patient finally came to autopsy, and the diagnosis was confirmed. In addition the pressure against the vertebral artery had caused a deep groove in the side of the medulla. He also remarks that a positive Wassermann and favorable results from mercury often lead to errors in the diagnosis of brain tumors. The Dr. writes that he has never seen a case of gumma which presented the typical symptoms of an acoustic tumor, which latter, as is well known, make up the greater number of cerebello-pontine angle tumors.

Thyroid Feeding in Mental Diseases.

—Eager (Journ. Ment. Sci.) says that of the many drugs and extracts which have been proved to have a beneficial effect in the treatment of the more or less stuporose forms of mental disease, there is none which has had the same success as thyroid feeding. Given in very large doses the extract seems to have a tremendous influence on metabolism. In dementia precox of the hebephrenic variety it is almost an essential. It is almost essential from the point of view of some observers. The above author, in his experience, found little benefit in this particular condition. In his experiments, the method adopted was that recommended by McPhail and Bruce, in which 60 gr. of thyroid extract a day are given in three doses. The treatment extended over 14 days in most cases, but in a few instances it had to be stopped. In the majority of cases a careful urinary examination was made, including an estimation of the percentage of urea. The results are embodied in the form of a table. Charts are given, illustrative of typical cases, and tables

summarizing the result of the thyrid feeding. The author concludes that the most favorable cases for the treatment are those of stupor or melancholia occurring in adolescents. Cases of dementia precox did not respond at all. An important fact is that the recovery rate falls abruptly after the age of 35. The author considers that the treatment does not act by producing a toxæmia, seeing that it fails to produce benefit at or after the climacteric, but that it stimulates some internal secretion, in all probability that of the reproductive organs.

On the Origin of Epileptic Fits.—Rothmann (Neurolog. Centralb.) goes fully into this question. The Dr. discusses the work done since the time of Fritsch and Hitzig discussed the electrical excitability of the motor cortex. The author mentions supporters of the purely cerebral theory of epileptic fits, and supporters of the theory which ascribes them to subcortical centres. The writer points out that there have also been supporters of the idea that cortical and subcortical centres are involved. Ziehen, from the evidence of experimental investigations, was the first to assert that the clonic components of a fit were purely cortical, whereas the tonic components had a subcortical origin. The Dr. pointed out that if, during a fit, the cortex were excised, the clonic component was entirely abolished, whilst the tonic component remained. Binswanger determined centres in the pons of rabbits, whose activity can be raised in such a way as to act as spasm centres. These attacks, however, had not altogether the characters of epileptic fits, only the tonic portion of the fits being reproduced. Binswanger therefore concluded that he had here isolated the tonic components of epilepsy. Ziehen, after the removal of the hemispheres in rabbits, was able to produce tetanic spasms by stimulation of the corpora quadrigemina and the optic thalamus, but he did not think that he had discovered thereby the spasm centre. Later, Ossipow confirmed Ziehen's work, and came to the conclusion that the clonic portion of the fit was connected with the hyperactivity of the cerebral cortex, whilst the tonic spasms were evoked by the hyperactivity of the deeper centres. Rothmann has drawn a number of conclusions from observations which he has made on dogs which have long survived complete extirpation of the cerebral cortex, but has also experimented in regard to the part played by the cerebellum in the production of the epileptic fit. He comes to the following conclusions: (1) The observation of the fits suffered by decerebrate dogs shows the tonic character in the extremities, whilst the affection of the

face muscles retains the clonic character; (2) the spasms produced by stimulation of the cerebral nuclei consists of a tonic spasm of homolateral extremities; this spasm chiefly affects the flexors, especially those of the fore limbs; (3) by the exclusion of the cortical centres of the extremities, and of the function of the cerebellum, one obtains in the dog spasms of all the extremities, and such spasms are characterized by the tonic extension; (4) the cortical fit employs in the dog and the ape the same paths as are concerned in voluntary movement and electrical stimulation, that is to say, the cortico spinal and rubro spinal lateral tracts in the dog, and in addition, in the ape, the ventral column; (5) the abolition of the cerebellar function does not appreciably influence the course of a cortical convulsion, even after destruction of the pyramidal tracts; (6) by the method of cooling the cerebral cortex after the method of Trendelenburg, one succeeds in reducing the spasms produced by electrical stimulation; (7) in the human being the cortical component of the epileptic attack is more in evidence, but still tonic cerebellar attacks certainly occur; (8) also in man it is likely that the cooling of the sensori-motor region of the cerebral cortex by means of a mixture of ice and salt, or by means of ethyl chloride, may have an influence in suspending the clonic epileptic attack, or at least in reducing its intensity. He suggests this as a possible therapeutic measure.

Malignancy of Mouth and Larynx.—

Trotter, in The London Lancet, points out that an important question to be decided in every case is whether the disease is to be attacked in a two stage or a one stage operation or that on the primary growth should be done first. In the great majority of cases there can be no doubt that the two-stage operation is necessary. The attempt to accomplish in one sitting the two very complete procedures can only lead to excessive danger to the patient or a risk of incomplete removal of the disease. The only exception to this rule is in the case of epilyngeal tumors. Here the primary growth can not be attacked until the glands have been removed, and on account of the situation of the growth the gland operation even can not be done with any safety without a preliminary tracheotomy. As to the sequence of the two stages the following general rules are those upon which the author decides. If the primary growth is in such a situation and of such size that rapid union can be obtained after removal of it, then the first stage should be on the primary growth and the second on the glands. This is chiefly in early tongue cases. In such cases the

whole treatment can usually be completed in a fortnight. Where the primary growth is such that rapid union is not probable (e.g., where the jaw has to be divided), the gland operation should be done first. This has its special disadvantage in the danger of pneumonia of an extensive neck operation when there is an ulcerating growth in the mouth, but the special advantage is that the gland operation is much easier when done first. Where the glands hinder access to the primary growth three courses are possible: (a) Gland operation first. Tracheotomy is usually necessary. (b) Primary growth and partial gland operations first (usually tonsillar cases). (c) Single stage operation (epilaryngeal cases). Where the primary growth or gland mass is of uncertain operability the one which is the more doubtful should be attacked first. The essential steps of the operation on the primary growth are as follows: Every operation for removal of a tumor must begin with a definite stage devoted to obtaining access to the mucous surface of the tumor. This is usually a perfectly formal anatomical procedure which applies to all cases when the same region is affected. As soon as the tumor is fully exposed a systematic attempt must be made to disinfect the region, and during the subsequent removal of the growth every effort must be made to preserve the wound from contamination. The surface of the ulcer should be cauterized, the surrounding mucous membrane cleansed with alcohol and the region of the tumor packed off so that mucus is prevented from flowing into the wound. The tumor is then excised with the size and form of surrounding margin dictated by the nature of the case. The wound from which the tumor has been taken must be closed by suture and such other plastic procedures as are necessary should be carried out.

Abdominal Operations on Children.—

Balas (Beitrag. zur Klin. Chirurg.) emphasizes the wonderful recuperative powers of children after abdominal operations as compared with adults, but warns against prolonged operations. Children withstand shock very poorly and therefore loss of blood, exposure of the intestines, and prolonged anesthesia must be avoided so far as possible. Diagnosis is of the utmost importance and is not easy, especially in young children. For example, the onset of pneumonia and acute appendicitis is very similar in many cases. In pneumonia, however, the abdominal facial expression is lacking, the tongue is clean, the respirations are more rapid, and the abdominal tenderness, while present, is superficial and disappears on deep, steady pressure. Rectal

examination is also of great assistance, if, as so often happens, the appendix lies in the true pelvis. Intussusception may be diagnosed by the movable mass, the absence of rigidity, and the passage of bloody mucus. Balas differs from the majority of American surgeons in that he believes in flushing the peritoneal cavity with saline, to counteract shock and sepsis. Drainage, also, is most important and should be more abundant than in adults, because of their lessened resistance. In tuberculous peritonitis the most favorable cases are those with effusion, and the benefit of the operation is due, in large measure, to the active hyperemia which follows the exposure of the intestines to the air.

Susceptibility of Gonococcus to Heat.

—Harrison and Houghton, in the Journal of the Royal Army Medical Corps, say that the gonococcus cannot resist a temperature of 104° F. for six hours. This fact, together with the observation that in high fever a gonorrhea sometimes disappears spontaneously, led these authors to investigate whether this fact could not be used in the treatment of gonorrhea. They found that the urethra will sustain a temperature of from 114° to 119° F. provided it is gradually applied. They therefore had constructed a closed metal catheter, No. 9 to 10 gauge, inclosing a smaller one, No. 2 gauge, about one inch shorter internally, but projecting externally one inch. The small inner catheter is open at both ends, while the larger outer one is closed at both ends, but has a discharge outlet near the outer end. The double catheter is passed, and the inner one is connected by rubber tubing with an irrigation vessel elevated about eighteen inches, from which a stream of water at 114° F. is allowed to flow, adding hot water gradually till the temperature is attained of 118, 121, 122, or even 125 degrees, according to the tolerance of the urethra. If the temperature is too high the meatus may be blistered. The irrigation occupies about one-half hour and a suppository of 1-75 grain of atropine is administered night and morning before treatment. The usual aseptic and lubricating precautions are of course adopted. The authors report sixteen cases thus treated, of which eleven were acute and purulent, five sub-acute or chronic and watery. The gonococci entirely disappeared in a period varying from the 4th to the 11th day after the first treatment. The character of the discharge at once changed to mucopurulent or mucoserous, and in six cases had disappeared entirely by the 8th day, and the administration of stout after the disappearance of the discharge failed to cause its

return. There were no accidents of any kind. Epididymitis did not occur; indeed, in one recent case with subacute epididymitis that condition disappeared after the first application. This method of treatment, owing to its simplicity, appears to demand a thorough trial at the hands of those who have considerable experience in the treatment of gonorrhea.

Treatment of Hepatic Abscess in Amebic Dysentery.—Chauffard (Bulletin de l'Académie de médecine) reports a case of hepatic abscess with bronchial fistula of five months' standing, due to amebic dysentery, in which subcutaneous injections of emetine, as recently recommended by Rogers, gave most excellent results. The patient had been expectorating bloody material to the amount of from one half to one pint daily, was feverish, and had two or three loose bowel movements daily. Though the case was about to be operated on, it was decided to try emetine first. Six injections of 0.04 gramme (two third grain) each were given in the course of five successive days, two being administered on the third day.

On the second day the patient already felt distinctly better. Although even on the first day the amount of expectoration was somewhat lessened, on the third day it was reduced to two ounces and on the fourth to one and one half ounce, while on the fifth the patient expectorated but three times in the entire twenty-four hours, this being, in fact, the last sputum obtained from the case. The temperature fell to normal on the second day and remained normal subsequently. The blood examination showed corresponding improvement, an ulcer previously observed in the rectum promptly healed, radiography showed a return of the lower pulmonary area and diaphragmatic vault to normal, and the patient gained in weight. The results were so prompt that no other explanation seems to the author admissible than that of a direct therapeutic sterilisation. Six weeks after the treatment had been discontinued there was no sign of recurrence.

The injections caused but little pain and no local induration, no anorexia, nausea, malaise, change in the pulse rate or significant fall in the blood pressure were noted.

Some Complications of Typhoid Fever in the Child.—Leenhardt, Maillet and Carieu (Ann. de méd. et chir. inf.) describe two cases of phlebitis in typhoid fever occurring in two brothers aged 14½ and 10 years. In the older boy the typhoid fever was of a very mild form. Pain was first perceived in the left leg on the eighteenth day of disease before defervescence had

begun. Within ten days the condition completely subsided. The fever in the younger child was of a more serious nature, but the phlebitis, which occurred as late as the fifth week of the disease, was very mild, the œdema being confined to the right foot and ankle and only lasting three days, while the pain was felt in the leg only and not in the thigh, and was of nine days' duration. There was nothing abnormal in the circulatory system of the patients or their parents. The condition was therefore due to the selective localizing influence of the typhoid bacillus. They also describe a case of relapse which, contrary to custom, was of a very severe nature. The primary attack was of moderate intensity, but on the twentieth day of the disease the temperature and pulse had fallen to 96.8 F. and 68. The same day the temperature and pulse again rose, the right heart dilated, and there was broncho pneumonia of both lungs. The belly became hard and rose spots appeared. There was severe diarrhoea. The patient became delirious, with carphology and subsultus. The relapse lasted for twenty-four days. Hemorrhage is rare in children. Three severe hemorrhages occurred in a girl, aged 10 years, on the tenth and twelfth days of disease. The first two hemorrhages consisted of 400 c.c. of black coagulated blood, the third of 300 c.c. After the hemorrhages the temperature fell 3½ degrees but the pulse was unaffected; they exerted no influence on the course of the disease.

Typhus Fever in Children.—Molodenkoff (Arch. f. Kinderheilk.) records his observations on the typhus epidemic during the first four months of 1911. 115 children aged from 1 to 14 years were affected. No cases occurred in the first year. There were 22 in the first quinquennium, 55 in the second, and 38 between 10 and 14; 50 were boys, 65 girls. All belonged to the poorer classes. Unlike other observers, Molodenkoff found that the fever lasted as long in children as in adults. The severest cases occurred between 8 and 13 and children under 3 had only mild or moderate attacks. All recovered (the mortality among adults in the epidemic was 8 per cent.). Otitis media occurred in 20, usually in the third week; mastoid abscess in 4; pneumonia in 2, on the sixth and seventeenth days, and there was one case each of myocarditis, nephritis and amentia. Three were followed by scarlet fever on the fourteenth to seventeenth days, two by whooping-cough and one by diphtheritic laryngitis. Among cases erroneously certified were 7 of typhoid fever, 3 of relapsing fever, 8 of pneumonia, and 1 each of in-

fluenza, erysipelas and acute gastritis. In the diagnosis Molodenkoff lays stress on the value of the diazo-reaction, which appears early, is well marked, and is absent only in a few cases. Another constant symptom is leucocytosis. At the height of the disease 10-16,000 white cells are found. The relative number of neutrophils is increased, and that of the lymphocytes is diminished. In treatment, special attention was given to keeping the mouth and throat clean. Tepid baths were regularly employed. Owing to strict cleanliness, ventilation and avoidance of over-crowding only one nurse was infected in the epidemic. Seven of the staff had previously not had typhus. The literature is reviewed and reference made to the recent observations of Nicolle (vide British Journal of Children's Diseases),

Relapsing Fever in Children in Odessa,

—Winocouroff (Arch. f. Kinderheilk.) says that relapsing fever in children is one of the mildest infections, since among 291 cases in the course of twenty years (1890-1910) treated in the Children's Department of the Israelite Hospital at Odessa, there was only one death, as compared with a mortality of 2 to 6 per cent. in adults. Children are less susceptible to the disease than adults, and their power of resistance is due to a healthy heart and a liver unaffected by alcohol. Complications, which are frequent in adults, are rare in children. The temperature curve in children shows many variations from the ordinary chart. The persistence in Odessa of a disease which has disappeared from Western Europe is due to the deplorable hygienic conditions prevalent in the town.

Use and Abuse of Atropine.—Harmon (West London Medical Journal) believes that atropine is the best drug of its kind. In acute iritis the use of atropine is of first importance. No matter what the general cause of the iritis may be, and what general treatment may be considered necessary or even urgent, the eye wants atropine, and the use or effective use of the atropine must come before all else. We must, if possible, get the pupil one widely; that checks the iritis, prevents adhesion, and saves the vision for the future. But it must be effectual; to use it ineffectually is not to use it but to abuse it.

A very powerful mode of administering atropine is to place a small crystal of the sulphate directly on the conjunctiva and allow it to be dissolved by the tears. That method he does not like; the risks of toxic effects are too grave. The most powerful effect can be obtained by a combination of

atropine and cocaine. Each will supplement the work of the other, as has been previously explained. A 2 per cent. solution of each in water, castor oil, or in an ointment of lanolin or vaselin gives perfect results.

In reference to the oil and ointment he says the oil spreads immediately and acts quickly, and leaves the eye clean for examination. The ointment is best for home use, for the attendant can see what becomes of the piece of ointment; it is either placed between the lids or it is not. With the watery solution an unskillful attendant more often than not drops the solution onto the cheek. Again, there is less risk of toxic symptoms and skin irritation with the oily and ointment preparations, for less is used, and but little gets into the nose.

In a case of acute iritis such a preparation should be used every two hours for the first twelve hours, and the atropine should be put in, for the first time, at any rate, by the surgeon himself. If the pupil can be dilated it will dilate under such treatment, combined with leeching, fomenting, purging, or such general measures as the case may indicate. To use weak solutions of atropine, one-fourth or one-half per cent., is utterly futile. It is not using atropine, it is abusing it, for it is a pretense at its use.

Again, to continue the use of an efficient atropine preparation day after day when the pupil will not dilate because of firm old synechiæ is to abuse the drug; for the ineffectual tugging of the muscles at the tough adhesions only irritates the eye.

Excluding these points, a mistaken use of atropine is most often due to a mistake in diagnosis. There is no place to enter into a differential diagnosis of conjunctivitis, iritis and glaucoma. But the best guard against such an error is always to watch the pupil. In an acutely inflamed eye a small pupil may mean iritis, but if it promptly dilates large and round it is surely not iritis, but probably only conjunctivitis. If the pupil dilates, but with pointed irregularities, there is, or has been, iritis. If the pupil is large, more or less oval or sluggish, it is most probably glaucoma. We should examine the pupil at each time a case is seen and look at it in a good light and through the best magnifying glass we possess. These things have to be looked for; they are not manifest to casual glances.

In chronic iritis atropine is less useful; sometimes it is injurious. In most of these cases the co-existing cylitis is the most serious condition, and whilst the atropine dilates or benefits the iris, it relaxes the ciliary muscles and allows of an added engorge

ment of the ciliary body. If there be evidence of severe cyclitis in the presence of vitreous opacities atropine had better be discarded and only a temporary mydriatic be used on occasions to insure that the iritis is not becoming adherent.

With few exceptions atropine ointment is the most comforting of applications for all sorts of corneal ulcers or injuries. The fatty base is comforting; the drug quiets the reflex irritation set up from the cornea. There are some cases, however, in which a sudden change from atropine to eserine works miracles.

Chronic relapsing phlyctenular ulcers, old and sluggish ulcers with much vascular penetration, do not always do well with atropine, but they may clear up with surprising quickness when the stimulus of eserine is applied. It is nearly as effective as the operative destruction of the invading vessels by peritomy or the cautery.

The use of atropine after wounds of the cornea, accidental or operative, is always a puzzle to the beginner. What shall he use, atropine or eserine? Which will best keep the iris from relapse?

The Celiac Affection.—Drury (Dublin Journal Medical Science) mentions the case of a girl three and a half years of age, who had had for many weeks attacks of diarrhea which resisted treatment and had gradually become almost constant. Emaciation, weakness and listlessness were noted. There was no fever. She slept and ate well and had no vomiting. The limbs were flabby. The abdomen was greatly distended, apparently because of flatulence. The bowels moved three or four times in twenty-four hours. Each motion was very copious—larger than one would expect for such a child as its single evacuation for the whole twenty-four hours. The motion was in appearance and consistence just like porridge, but whiter and usually slightly frothy. When passed a great deal of flatus was released with it. There was no obvious mucus to be seen in the stool unless an aperient had been given. The odor was extremely disgusting. The stool contained no excess of fat. Week after week the child continued in much the same state, no better, no worse; just maintained her weight or lost a few ounces; lay quiet, apathetic, and uncomplaining, slept well and ate all she could get. Gee has described this condition under the heading "The Celiac Affection." Fever is usually absent. A fatal termination is common. Nothing is known of the pathology. The treatment, in a word, is—stop all milk and carbohydrate food, and feed entirely on raw meat and meat extracts. Within two or three days

of the adoption of this line of treatment the stools began to assume the ordinary color; they were smaller in quantity and number, but were even more offensive than before. This, however, gradually subsided. The abdomen, too, became less and less distended, and finally quite normal in appearance. The child's general condition remained just the same—dull, apathetic, silent, taking no interest in anything, and not gaining in weight. After some weeks carbohydrates were added very gradually to the diet. Under this she began to put up weight, to show more life, beginning to talk, sing, play with toys and other children, and so went on till she became quite normal in these respects. A little milk was tried, but at once she got diarrhea with mucus in stools, and it was stopped. The chief difficulty seems to be to get the patient gradually onto ordinary diet and to know when to begin to do so. It appears that milk has a more prejudicial effect than other foods.

Acute Endocarditis in Childhood.—

Nobecourt (Jour. de med. de Paris) says that in acute cardiopathies there is a possibility of survival and fair conditions in adult life. Acute endocarditis is common in children. It would seem that in the child there is a predisposition to endocarditis which continues into adolescence. It is rare under three years of age. This disease is always of infectious origin, and may be caused by a variety of germs; all varieties are found, from the simple to the malignant types of endocarditis. The signs of infection may be so slight as not to be recognized, and yet the heart involvement be quite pronounced, leaving valvular lesions. Very often a condition of lymphatic enlargement of tonsils and adenoids is found in these children. Acute articular rheumatism is frequent, complicated with generalized fever and general symptoms. Again the lesion is accompanied by no fever, and almost no pain. Rheumatism is the most frequent cause of endocarditis; chorea is also accompanied by heart lesions; scarlatina and all the other infectious diseases of childhood and adult life may cause lesions of the valves due to an accompanying endocarditis. Family predisposition and overwork are occasional factors in endocarditis. There may be simple proliferative lesions of the valves, the mitral being the one most frequently affected. The symptoms of palpitation, dyspnea, pain, and rapid pulse are not frequent, and when they are present the development of a pericarditis, or myocarditis, is to be suspected. Percussion may give change in the size of the heart, but the most information is gained by auscultation. A low, dull

murmur quite different from the harsh hissing murmur of chronic endocarditis may be heard. Mitral murmurs are heard at the apex, not transmitted to the left. In children under five years of age modifications of the sounds are hard to detect, and only later is the murmur heard. The valvular murmurs may clear up or remain permanent. We must be on the lookout for relapses and not declare the case cured too early. The simplicity of the symptoms should not lead us to call this affection benign; its remote prognosis is grave, for it may end in chronic valvular lesions.

Suprarenal Origin of Acetonemic Vomiting.—Terrien (Ann de Med. et Chir. Inf.) says that cyclic vomiting in children, sometimes called acetonemic vomiting, is often caused by passing suprarenal insufficiency. If this is so opotherapy will be of great value in the treatment of such cases. He reports three cases in detail, from which he draws the following conclusions: Rapid cessation of symptoms, or marked relief from them followed the use of injections of adrenalin. The signs of suprarenal insufficiency are asthenia, varying from simple lassitude to complete depression and semi-somnolence; lumbo-abdominal pains, digestive troubles, and circulatory disturbances varying from hypotension to syncope and sudden death. These same symptoms may be seen in acetonemic vomiting. Similar symptoms seen in incoercible vomiting in pregnancy and in typhoid fever have yielded to the use of adrenalin. If we can have anatomical confirmation of these facts in the form of autopsies on fatal cases we shall be in a position to state the facts more certainly. In such autopsies no note has been made of the condition of the suprarenal capsules. One complete autopsy has shown fatty degeneration of the liver and a hemorrhagic focus in the left suprarenal capsule. The hepatic insufficiency noted in cyclic vomiting may be the result of a general intoxicant.

anomalies of heat regulation, headaches, somnolence, precocious senility, and various nervous disorders. The author has obtained the best results in the treatment of these conditions with the dry extract of the thyroid gland, administered in doses of 50 centigrams. This drug is particularly of value in the treatment of infantile convulsions.—*Revue de Medecine.*

Calomel.

A child 2½ years of age, suffering from a mild attack of gripe, was given by mistake a 0.3-gm. (5-grain) cachet of calomel instead of a 0.2-Gm. (2 grain) cachet of antipyrin. No untoward manifestation was noted, and the mistake made was not realized until five hours later, when immediately after the child had been given to drink 1-4 of a glassful of Vichy water, she was seized with convulsions, the head being extended, the eyes turned up, and the arms stretched out on the bed with the fists clenched and executing clonic movements. The spasms ceased after four or five minutes, and the breathing, previously jerky, simultaneously stopped. The face became violet, foam appeared on the lips, the head sank to the side, and the extremities became limp. The pulse could not be felt. Sylvester's method and rubbing with vinegar resulted in a return of the circulation and respiration within five minutes, but consciousness was not regained and the eyes remained fixed for an hour after.

A large glycerinated enema brought about abundant evacuation of formed yellow feces and a diminution of the abdominal distention previously present. Later vomiting of glairy material took place, and two copious evacuations of greenish yellow extremely offensive material occurred. On the succeeding two days, fever, slight cough, and evanescent disseminated rales were noted. The treatment consisted of antipyrin and quinine, tincture of iodine and cotton wrapping externally, and later syrup of cinchona. Rapid recovery followed.

This child had never had convulsions before; nor did she have any in the two years after the calomel and Vichy adventure. The disturbance seems to have been caused through an immediate reaction taking place between the sodium alkali in the Vichy water and the calomel, the latter having been taken five hours before and become more or less altered during its sojourn in the digestive tract. Spindler in *Presse medicale.*

Miscellaneous.

Thyroid Treatment of Epilepsy.

E. Gelma records the happy results following the use of thyroid extract in cases of epilepsy associated with goiter, myxedema, or some other perversion of the activity of the thyroid gland. The following are enumerated as signs of slight degrees of hypothyroidism: Permanent or transitory edema, nasal obstruction, frequent muffling of the voice, falling out of the hair of the eyebrows, cavities, alopecia,

Treatment of Diphtheria.

Koehler praises the action of hydrogen peroxide applied locally in diphtheria but finds that most of the preparations on the market are either too weak or give up their oxygen too rapidly. He obtained much better results with perhydrol, which he states is a preparation of exceptional purity and contains 30 per cent. by weight of pure peroxide and liberates 100 times its volume of oxygen. The author uses the perhydrol in combination with glycerin since the latter delays the evolution of oxygen and by itself has a very favorable action upon the membranes in that it attracts water and thus favors a drying out of the pathologic tissues. The following is the formula he generally employs for local application: Perhydrol, 3 Cc.; glycerin, 30 Cc. The results are no less satisfactory in follicular, lacunar and catarrhal angina. Where a gargle is desired in addition, he recommends the following formula: Perhydrol, 6 Cc.; aquae dest., 300 Cc. Sig.: One to two tablespoonfuls to one cup of boiled water. To be mixed shortly before use.—Klin. therap. Woch.

Therapeutic Action of Splenic Extract.

H. R. Harrower gives the following summary of the actions of splenic extract, as a result of the analysis of nearly fifty communications on the subject. Its value is due presumably to certain splenic hormones on which, in a degree, the following phenomena are dependent. 1. Leucocytosis, phagocytosis, and possibly hemoglobin formation and iron metabolism; 2. tryptic digestion, thus directly increasing assimilation and nutrition; 3. Intestinal digestion and the production of enterokinase; 4. the process of healing, both as regards the cessation of hemorrhage and the production of rapid connective tissue formation; 5, increase in the functions of the spleen itself. These actions are all held to be the grounds for the beneficial effects of splenic extract in pulmonary tuberculosis, and to them there is to be added the fact that the extract exerts antagonism to the tubercle bacillus by an influence on its culture medium in the body, due to production of a colloidal substance.—Lancet, London.

Gold Salts in Malignant Tumors.

Experimental studies upon the effects of various gold salts on the malignant tumors of animals have been made by C. Lewin. He employed gold and sodium chloride, colloidal gold and gold and potassium cyanide intravenously. The effects of these gold salts were very pronounced in the carcinomata of mice. After as few as

two intravenous injections, degenerative changes are very apparent; hemorrhages takes place into the tumor and the specific cells become necrotic. After three or four tumor injections, even hard tumors may be converted into cystic structures filled with cell detritus. It seems as if the gold salts had a specific toxic action upon the capillaries of the tumor and not upon the tumor cells, as has been claimed for other metallic salts. The capillaries of tumors are particularly vulnerable since they are the most recent in the organism and probably have insufficient resisting powers owing to their rapid growth.—Berl. Klin. Woch.

Treatment of Pyelitis.

In an acute attack of pyelitis, A. v. Liechtenburg introduces a catheter into the ureter up to the pelvis of the kidney and leaves it in place for 24 hours. Efficient drainage is thus established and the temperature will readily drop. Pus and bacteria will, however, continue to be present in the urine and the resulting chronic condition will require treatment. This is best accomplished by irrigation of the renal pelvis with collargol solution every 2 to 4 weeks until the urine is sterile. Recurrences can only be avoided by taking the mechanical conditions into consideration. If there is stagnation in the renal pelvis owing to ptosis of the kidney, it is evident that a fixation of this organ is necessary. The exact condition of the pelvis can always be determined by the Roentgen rays after the pelvis has been filled with collargol. In some cases of very long standing, with involvement of the renal tissues, a nephrotomy or even a nephrectomy will be required. In enterogenous colipyelitis, decapsulation of the organ will often prevent relapses since it will remove the paths by which the germs reach the kidneys.—Therap. Monatshefte.

Laryngitis.

The following procedure is employed by the author: There is placed, or the patient places himself, on the tongue 0.3 to 0.4 Gm. (5 to 6½ grains) of an absolutely dry powder of orthoform or anesthesia. A few movements of deglutition, performed without previous admixture of saliva with the powder, cause the latter to descend to the level of the epiglottis and arytenoepiglottidean folds. On its way it comes in contact with the infiltrated areas or ulcerations covering the entrance to the larynx, and in a few minutes the patient is able to swallow without distress. Where the ulcers are in the interior of the larynx, however, the measure is not so effectual. The dose referred to can be repeated three or

four times daily for several weeks without any inconvenience. The procedure is also recommended for cases of quinsy and after operations on the tonsils. Hinsberg in the *Journal de medecine et de chirurgie pratiques*.

A successful medical practitioner of many years standing makes the following statement:-

"There are a large majority of combinations which extemporaneous pharmacy cannot prepare properly; and I know that through the dishonesty, ignorance, or indifference of many retail druggists we are not able to get on prescriptions the very best drugs; hence it is to the manufacturing pharmacist, whose best interest lies in the purity and uniformity of his product, that we look for our most reliable remedies.

I endorse worthy proprietaries, but I most heartily condemn the great tendency of manufacturing pharmacists to foist upon the profession and public cheap imitations of standard preparations".

Iodiosyncrasy To Arsenic.

Two cases of iodiosyncrasy to arsenic in the form of sodium cacodylate are recorded by Staeuble (*Deut. med. Woch.*) who reviews the recent advances made in the study of the action of the various compounds of arsenic on the body. One patient, a man aged fifty-two, suffered from malaria, general debility, and neurasthenia for which sodium cacodylate was prescribed. The first injection of 0.05 gramme, taken from a Bloch's ampulla, caused no disturbance. The same amount was introduced into the right forearm four days later. After twenty-four hours a rectal temperature of 101.8° great weakness, pain in all the limbs, and in the loins, and a sensation of pressure, in the head were observed. The site of the injection was hot and brawny, and erysipelas was suspected. Next day, however the temperature was almost normal, the general condition was better, and the local swelling was no larger. Scrupulous cleanliness was exercised when, four days later, the same dose was given, but twenty-four hours later the same phenomenon recurred, and the injections were therefore discontinued.

The drug had been administered to many other patients without ill effects by the author, when he again observed symptoms of iodiosyncrasy. The patient, a woman aged thirty-six, who suffered from exophthalmic goitre, had been given twenty-four injections of 0.05 gramme of Clin's sodium cacodylate on twenty-four consecutive days without in effects. On August 14 the last injection was given. On August 24 she

left the lowlands and came to St. Moritz, where, two days later, she was given an injection of 0.05 gramme of the drug. Next day her temperature was 102.2°, and she complained of "rheumatic" pains throughout her body, anorexia, and headache. Her respiration was labored and asthmatic. Although scrupulous cleanliness had been exercised, the site of the injection was hot and brawny. On the second day the patient was much better, and on the third day the temperature was normal and the swelling began slowly to disappear. As the needle had previously contained tuberculin, it was thought that a trace of this might have been injected with the sodium cacodylate, for the reaction was like that which follows an injection of tuberculin. This view was disproved by the repetition of the reaction on September 8, twenty-four hours after the patient had injected half the usual dose of sodium cocodylate into her left thigh. The local but not the general reaction occurred. On September 9 the author substituted Bloch's for Clin's preparation, and injected 0.05 gramme into the right thigh after careful disinfection of the skin. Next day the temperature rose to 102°, with a rigor in the evening. The other symptoms resembled those of the previous attacks, but were less marked. The site of the injection was again inflamed. The patient had completely recovered when on September 16, she was given an injection of 0.025 gramme. Twenty-four hours later the site of the injection was firm and swollen, and the temperature was slightly raised. The same dose, injected on September 20, produced less fever, but a more violent local reaction than on the previous occasion.

The cutaneous reaction of the drug was now tested by von Pirque's method. After the skin had been cleansed and lightly scarified in three places, glycerin was applied in two places and sodium cacodylate to one. After eighteen hours the former two control places showed no reaction, while on the third place a reddened and infiltrated papule, 8 mm. in diameter, had appeared. This increased in size during the next thirty hours, and was still palpable two days later. The only explanation the author can give for the patient's erratic behavior is that the passage from a low to a high level effected a change in the metabolism which rendered the tissues intolerant to the drug—*British Medical Journal*.

Biliary Deficiency.

"Defective elimination of bile, either from obstruction or physiological causes is often attended by a costive habit and a produc-

tion of intestinal gases, probably due to absence of the cholates, Nature's physiological chologogue."

G. K. Dickinson, M. D.,
Medical Record.

Chologestin (or Tablogestin) efficiently supplies the needed hepatic stimulation, encourages the secretion of a normally active biliary fluid, checks putrefactive decomposition, assists in the emulsification of fats and, by promoting both bile and bowel drainage, acts as a physiologic laxative when constipation is due to hepatic inactivity and biliary deficiency. Samples, formula and literature from F. H. Strong Company, 58 Warren Street, New York City.

The physician desires of achieving the utmost possible success finds himself each day using a variety of serums and bacterins.

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Distilled Water In Syphilis.

The treatment for syphilis recommended by Stephens consists of the hypodermic in-

jection of 6 to 10 c. c. of distilled water every three days for two to four weeks. He was induced to give this treatment a trial as the result of some research work on surface tension. He claims that the addition of distilled water to blood corpuscles so affects the osmotic pressure as to cause a passage of water into the cell, which gets larger and eventually scatters its contents. In disease the rapid catalytic changes and the rapid production of antibodies are interdependent, and if one can induce these marked catalytic changes with or without a vaccine, one stands the chance of setting free a number of very useful and remedial antibodies. In such a chronic disease as cancer it seemed to Stephens that the process was allowed to continue owing to the absence of sufficient antibodies, or at least a sufficient number to act together at the same time, and if one could set free any catalytic antibodies in sufficient numbers one might get a good result. Knowing of no vaccine to induce this antibody effect, it occurred to him that the injection of distilled water might so affect the surface tension as to bring about the osmotic effects. The marked effect produced by the injections of distilled water made him feel certain that in any similar disease of less malignancy their effect ought to be still better, so with that object he undertook the treatment of syphilitic patients. The Wasserman reaction is, in his opinion, nothing but a very roundabout way of determining the surface tension at which hemolysis occurs, and if, he says, this view is correct, the time ought not to be far distant when a simpler and more scientific method is introduced, and one that is not open to so many pitfalls. He cites six cases—British Medical Journal.

Mississippi Valley Medical Association.

Preliminary Program and Circular of Information of the Thirty-ninth Annual Meeting at New Orleans, La.,
Oct. 24, 24, 25, 1913.

The Mississippi Valley Medical Association meeting will be held at the Hotel Grunewald, New Orleans, La., Thursday, Friday and Saturday, October 23, 24, 25, 1913, under the Presidency of Dr. Albert E. Sterne of Indianapolis, Ind.

The arrangements for the meeting are in charge of a committee headed by Dr. W. W. Butterworth, a full list of the committee being printed below. Information in regard to accommodations should be addressed to Dr. M. A. Shlenker, New Orleans, Chairman of the Hotel Committee.

The meetings of the Association have always been made more pleasant because of the number of ladies present. It is hoped a large number will attend this year. The local committee promise much of interest for them.

Railroad Rates

Advantage can be taken for this meeting of the regular round-trip home seekers' rates to Southern territory which are practically one fare for the round trip. These tickets are on sale only on Tuesday October 21st. A saving can be made in the tickets if it is not convenient to leave on the 21st, by purchasing a round-trip winter tourist ticket.

Headquarters.

The Hotel Grunewald has been selected as headquarters, and all general meetings and both medical and surgical sections will be held on the top floor. The commercial exhibits will also be on this floor. Members and visitors are urged to make reservation of rooms as early as possible.

Panama Trip.

A contract has been entered into with the Travel Science Bureau of St. Louis for the trip to Panama, and details of the cost and extent of the trip will be sent on request.

Scientific Program.

Note.—All papers read at the meeting in full, in abstract, or by title are the property of the Association, and cannot be published except in the official manner, without permission.

The following is a list of papers completed to August 15th:

Symposium on Pediatrics.

Classification of Gastro-Intestinal Diseases of Infancy—I. A. Abt, Chicago, Ill.
The Feeding of the Sick Infant—Frank C. Neff, Kansas City, Mo.

Pyloric Stenosis in Infancy; an Analysis of Twenty Cases Personally Operated Upon—H. M. Richter, Chicago, Ill.

Researches in the Chemistry and Metabolism of Digestion—Julius H. Sedgwick, Minneapolis, Minn.

Some Points in the Treatment of Acute Ileocolitis—J. Ross Snyder, Birmingham, Ala.

Discussion opened by W. W. Butterworth, I. R. DuBuys, New Orleans, La.

Symposium on the Kidney.

Medical Treatment of Bright's Disease—W. F. Boggess, Louisville, Ky.

The Nature, Cause and Principles of Treatment in Nephritis—Martin H. Fisher, Cincinnati, Ohio.

X-Ray in Kidney Lesions—Walter Dodd, Boston.

The Pathological and Clinical Aspects of Renal Infection—Daniel N. Eisendrath, Chicago, Ill.

O. S. Fowler, Denver, Colo.—

J. Bentley Squier, New York, N. Y.—

Some Phases of Kidney Surgery—Henry J. Scherck, St. Louis, Mo.

W. N. Wishard, Indianapolis, Ind.—

Discussion opened by John R. Caulk, St. Louis, Mo.

Symposium on the Social Hygiene.

Social Factors in the Prevention of Insanity—Frank P. Norbury, Springfield, Ill.

Heredity and Eugenics—John D. Tra-
wick, Louisville, Ky.

Various Aspects of the Social Hygiene Movement—R. S. Yarros, Chicago, Ill.

Symposium—General Session.

The Relation of Anaphylaxis to Immunity and Disease—Victor C. Vaughan, Ann Arbor, Mich.

The Result of the Study of Various Theories of the Anaphylactic—Richard Weil, New York, N. Y.

Some Recent Results of Cancer Investigation—Leo Loeb, St. Louis, Mo.

Ovarian Secretions—T. J. Watkins, Chicago, Ill.

Discussion opened by G. W. McCaskey, Ft. Wayne, Ind.

Symposium on the Circulation and Blood Pressure

Surgical Aspect—J. L. Yates, Milwaukee, Wis.

Disorders of the Peripheral Circulation—J. B. Marvin, Louisville, Ky.

The Clinical Significance of Diastolic Pressure Variations with Especial Reference to Hypertension and Cardiac Overload—Willard J. Stone, Toledo, O.

The Functional Testing of the Cardiac Power—Charles Spencer Williamson, Chicago, Ill.

Blood Pressure and Cardiovascular Disturbances—Geo. F. Butler, Kramer, Ind.

Rheumatism, Its Etiology, Pathology and Treatment in a Study of Over Three Hundred Recorded Cases—W. F. Barclay, Pittsburgh, Pa.

Endocarditis with Specimen—Robert H. Babcock, Chicago, Ill.

Some New Points in Round Ligament Surgery, with Lantern Slide Illustration.

Thyroid Surgery with Special Reference to the Technic—A. E. Benjamin, Minneapolis, Minn.

Embolism and Thrombosis; A series of unusual circulatory accidents occurring in acute infections—Walter L. Bierring, Des Moines, Ia.

On Symbolism and Word Obsession—C. B. Burr, Flint, Mich.

Tuberculosis in the Mississippi Valley—

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is so generally recognized as the main causative factor in many serious diseases—notably **tuberculosis**, **typhoid fever** and other **infectious ills**—that the first evidence of its development should always lead to its vigorous treatment. Fortunately the practitioner has in

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a dependable means of so stimulating the physiologic processes of the body that malnutrition and debility can be promptly overcome and the whole organism given new and increased power of resisting disease. Thus, "Gray's" can be relied upon not only to restore the vitality of the body but also to fortify it against germ attack.

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Jackson's Membrane in Children—Joseph Rilus Eastman, Indianapolis, Ind.

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Geo. Dock, St. Louis, Mo.—

Arthur R. Elliott, Chicago, Ill.—

Diabetes—Charles P. Emerson, Indianapolis, Ind.

Treatment of Recent Fractures of the Femur—Duncan Eve, Nashville, Tenn.

Recognition of Renal Calculus—Louis Frank, Louisville, Ky.

Charles H. Frazier, Philadelphia, Pa.—

Eugene B. Glenn, Asheville, N. C.—

Is it Ulcer of the Stomach or Gall Stone?

—W. D. Haggard, Nashville, Tenn.

Pancreatitis as a Factor in Digestive Disorders—W. D. Haines; Cincinnati, O.

Urgent Need for a More Thorough Study of Disease Affecting the Region of the Rectum—Granville S. Hanes, Louisville, Ky.

Jabez N. Jackson, Kansas City, Mo.—

The Medical Treatment of Goitre—J. H. Johnson, Coffeyville, Kas.

The Acute Surgical Abdomen—Abuse of Purgatives—Floyd W. McRae, Atlanta, Georgia.

The Use and Abuse of Exercise and Rest in the Treatment of Pulmonary Tuberculosis—C. L. Minor, Asheville, N. C.

A. J. Ochsner, Chicago, Ill.

Classification and Diagnosis of Goiter—H. S. Plummer, Rochester, Minn.

The Possibility of Differentiating Between Active Quiescent and Healed Tuberculosis by the Character of the Reaction to the Cutaneous Tuberculin Test—F. M. Pottenger, Monrovia, Cal.

Extrophy of the Bladder, with Case Reports—C. E. Ruth, Des Moines, Ia.

Sidney I Schwab, St. Louis, Mo.—

Test-meal Findings in 700 Cases of Cancer of the Stomach—Frank Smithies, Rochester, Minn.

The Resuscitating Influence of Adrenalin and Normal Saline Solution—H. G. Sloan, Cleveland, O.

Notes.—Members are requested to register promptly at the registration desk on arrival, and receive programs, invitations, etc. It is especially requested that the names of all ladies in attendance be left at the registration desk for the use of the local ladies, committee.

The scientific sessions are open to the general profession, and the laity are urged to attend the general session the first evening when the address of the President and the orations in medicine and surgery and the memorial address will be delivered.

Committee of Arrangements.

W. W. Butterworth, M.D., Chairman;

Vice-Chairman, J. J. D'Aquin, M.D.;

Finance, E. M. Hummel, M.D.; Entertainment, Allan Eustis, M.D.; Ladies, Mrs. S. M. D. Clark; Reception, J. P. O'Kelly, M.D.; Exhibits, S. C. Stanton, M.D.; Clinics, J. F. Oechsner, M.D.; Transportation, Denegre Martin, M.D.; Headquarters, G. K. Pratt, Jr., M.D.; Registration, A. Nelken, M.D.; Badges, C. N. Chavigny, M.D.; Hotels, M. A. Shlenker, M.D.; Publicity, W. M. Perkins, M.D.; Sanitary Exhibits, Oscar Dowling, M.D.; Scientific, C. C. Bass, M.D.

Diarrhea.

A report of the results given by various forms of treatment in a series of 444 cases of infantile diarrhea in Cairo, Egypt, is made by the author. He sought to determine, in particular, the value of subcutaneous saline injections as a routine treatment, as well as to ascertain whether the "marine plasma" of Quinton possesses any special properties lacking in other saline solutions. The conclusions reached were that (1) Saline injections alone, without drugs, are capable of curing most cases of infantile diarrhea. (2) Quinton's marine plasma has no definite superiority over artificial saline of the same strength. Such hypertonic solutions are preferable to weaker ones (0.75 per cent. or less). (3) Medicines are preferable to saline injections as a routine treatment of infantile diarrhea. (4) Disregard of dietary instructions is the commonest cause of failure of out-patient treatment. (5) Injections are valuable in proportion as the loss of fluid—by vomiting and diarrhea—exceeds the intake. They should be given before actual symptoms of collapse arise.

The medicinal treatment employed by the author was as follows: When vomiting was at all a prominent symptom, dilute iodine solution was prescribed consisting of 3 minims (0.2 c.c.) of the tincture in 1 ounce (30 c.c.) of water. Of this a small teaspoonful was given every two hours, before each feeding. This was so successful that it was often given to cases on saline injection treatment in which vomiting had persisted. The most useful drug was found to be calomel, $\frac{1}{6}$ grain (0.01 Gm.), combined with bismuth subcarbonate, $2\frac{1}{2}$ grains (0.15 Gm.), which gave better results than mercury with chalk. In addition to the powders, a little carminative mixture was given, with the addition of rum if there were signs of collapse. When mucus and blood in the stools showed the large intestine to be chiefly involved, salines (sodium sulphate or phosphate) were prescribed with success. The addition of a little tincture of opium in bad cases was beneficial. Of 58 cases treated with these

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possesses much more than ordinary antiseptic properties, a point that makes it of exceptional value in purulent wounds.

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medicines only, 55, or 95.1 per cent., recovered.

The Ringer solution administered as artificial saline by the author contained: Sodium chloride, 0.9 per cent.; potassium chloride and calcium chloride, of each 0.02 per cent., and sodium bicarbonate, 0.01 per cent. The injections were given from a small glass reservoir fixed about 3 feet (1 meter) above the patient, through rubber tubing and a platino-iridium needle, the whole being sterilized before use. The skin at the site of injection—usually the side of the abdomen—was sterilized with tincture of iodine only, and the puncture afterward sealed by collodion. The dose varied from 25 to 150 c.c. (6 drams to 5 ounces), according to circumstances, the average being 60 c.c. (2 ounces). Where injection of 30 c.c. (1 ounce) caused much swelling, no more was given; whereas if it was quickly absorbed more was run in. When, however, there were signs of failing circulation, large doses were given two or three times a day. Immediate cessation of vomiting after a single injection was rarely seen, but improvement was generally manifest after the first day; unless the injections were continued a relapse usually occurred. The injection was followed by a temporary rise of temperature, due to bacterial products, which it is practically impossible to exclude; this contraindicates the injections for cases with already very high fever. Of 62 cases treated with the artificial Ringer only, 51, or 85 per cent., recovered—a less proportion than among those treated medicinally alone.

The conclusion is thus reached that for the average case, medicinal treatment is to be preferred. The indications for saline injections—which should supplement and not supersede the medicinal treatment—are: (1) persistent vomiting of food or of medicine; (2) falling temperature with aggravation of other signs; (3) exhaustion shown by sinking of the eyes and loss of elasticity of the skin. In many cases which had not improved on medicinal treatment, saline injections yielded a fair measure of success. When collapse symptoms were evident, injections were most valuable, and in several instances saved life.—Day, in *The London Practitioner*.

Biologic Value of Infant Food.—Crookshank (*British Journal of Children's Diseases*) says that if some statistician will take the trouble to ascertain the relative fertility and maternal efficiency, from the lactiferous point of view, of mothers who were artificially fed themselves, he will find there is a definite correlation between arti-

ficial feeding in infancy and the function of various glands in later life.

Brady finds that the addition of malt and "polycarbo-hydrates" to the milk where-with young babies are fed is highly advantageous, and gives him better results than any percentage method of feeding.

There are two malted foods that are pre-eminently useful; the first contains dried milk, with malt, some converted starch and now, I believe, added citrates. The second is a member of a well-known series of foods, and, though professedly compounded for children over six months or so, has been found from experience to be perfectly suitable for much younger infants. It has not, however, the advantage possessed by the food first mentioned of being preparable at a pinch, and in time of illness or summer heat, without fresh cow's milk.

It is not a bad plan, too, for the first fortnight of life, to use the malted milk made with water alone in any case—a small teaspoonful of the powder to the ounce or more. Then when the meconium has been all cleared away and the body-cells have had ten days or so to accustom themselves to the malt and dried milk, fresh milk can be introduced gradually in increasing quantities, by weekly or fortnightly half-ounces, till, at the end of six months, the child is taking nearly or quite undiluted fresh cow's milk, with a not very greatly increased quantum of the added powder.

He likes the use of gelatine. A tiny infant, in times of sickness, will benefit by a few spoonfuls of plain jelly made at home from packet gelatine; and for those a little older the jelly into which good broth sets may be used. Since both these forms of jelly melt at a low temperature, they easily slip down the throat. But milk jelly, highly valuable as it undoubtedly is, does not melt, and has to be swallowed almost as a solid. Any child who can digest cow's milk can, of course, digest both junket and milk-jelly. Nor should either milk or buttermilk be forgotten. Both have their values, and practical acquaintance with the details of whey-making will serve the practitioner in good stead. Incidentally, it may be pointed out that milk which will not make good junket is of indifferent biological value, and to be prohibited, whatever its bacteriological purity or chemical composition.

Erysipelas.

For many years the author has used, in the treatment of erysipelas, a remedy which he considers a rapid abortive action on the disease, viz., buttermilk, which he orders

to be applied on soft rags, the latter to be kept constantly wet with it. In the first case in which it was used, the pain was immediately relieved and quickly removed altogether. The temperature remaining high, however, it was suggested that, in addition to the local application buttermilk should be taken by mouth. Upon trying this, the temperature was observed to drop almost at once from 104° F. to 99°. The inflammation very rapidly subsided, and the patient was practically well the next day. In the numerous subsequent cases in which free local application of buttermilk was employed, uniformly favorable results were secured, the spread of the inflammation being rapidly checked, whatever the stage of the erysipelas, the pain disappearing and the whole morbid process rapidly aborting. The author is unable to state whether this undoubted abortive power is due to the presence of beneficent micro-organisms in the buttermilk, to the antiseptic action of its lactic acid, or perhaps to both these factors together.—Arnold in the London Practitioner.

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nascent oxygen in each dose of 10 drops, is intended to meet conditions of defective oxidation, to energize the nutritive functions, increase appetite, and by materially aiding the patient in obtaining the greatest possible value from foods ingested, to augment the body weight—a synergist co-operating with other elements and promoting their action—a medication, in contradistinction of the method, whose chief aim is, by active remedies, to destroy or expel the disease, instead of seeking to build up the strength of the patient.

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Correlation Between Complexion and Resistance to Auto-Intoxication.

I should like to call attention to the extraordinary variation in the resisting power of the individual as manifested by the color of the hair, not only to the changes in the fat and color of the skin already referred to, but to all other consequences of auto-intoxication. The darker the hair the lower is the resisting power to auto intoxication, and the more conspicuous are the changes which result from it. On the other hand, if the hair is red or of a peculiar towy color the individual has a minimum of resisting power to the action of these poisons, and that resisting power varies directly with the distribution and with the intensity of the redness of the hair. This is manifested very conspicuously in the influence exerted by the toxins on the appetites of the individual. The darker-haired subject will loathe the sight of food and frequently abhor any sexual relationship, while the red-haired subject rarely manifests these effects, even in the extreme conditions of intestinal stasis. This influence of toxins on the normal appetite is of far-reaching importance in our present state of civilization and is the source of much misery, discontent and trouble, to which I will not do more than allude here.—Andrewes, Proc. of the Royal Soc. of Medicine.

The Clinical Diagnosis of Latent Hereditary Syphilis.

Goldreich calls attention to the importance of this subject, inasmuch as in one-third of all cases of latent inherited syphilis the Wassermann reaction is negative. The most distinctive sign is enlargement of the cubital lymph nodes. These were palpable in 104 out of 130 of the author's cases of latent syphilis. In non-luetic infants these were palpable in from 15 to 17 per cent, of

the cases.—*Zeitschrift für Kinderheilkunde.*

Infantile Lithiasis.

Von Bokay notes that the incidence of this condition varies in different countries. In some parts of the world it is practically unknown. In Hungary and in the central part of Russia along the Volga it is quite common. An analysis of 1,836 cases shows that the disease occurs in children most frequently between the second and seventh years. There were 1,319 cases of vesical calculus, 9 of renal calculus, and 508 of ureteral calculus. In the etiology of infantile lithiasis obstruction to the urinary outflow plays a predominant role. The main obstruction is congenital phimosis and the adhesion of the prepuce to the glans.—*Zeitschrift für Kinderheilkunde.*

Abortive and Familiar Types of Exophthalmic Goiter.

R. Dumont reports two cases of exophthalmic goiter. One of the patients was an unmarried woman aged 31 years, whose, uncle, on the paternal side, had a double exophthalmos. Her symptoms were chiefly a tremor, extreme irritability, congestion of the face, and cyanosis of the extremities although there was no marked enlargement of the thyroid gland. The second case was that of a male aged 21 years, whose mother was affected with typical exophthalmic goiter. The symptoms in this patient were a moderate tremor, a slight enlargement of the thyroid gland, vasomotor disturbances in the skin, irritability of temper, insomnia, and a unilateral exophthalmos.—*La Polyclinique.*

Immunity of the White Rat to the Diphtheria Toxin.

Pettit reported to the Societe de Biologie, June 7, the results of his investigations on this subject. He found that this animal possesses a resistance to the diphtheria toxin in greater than that of any other mammal. Whereas a dose equal to one fifteen-thousandth of the body weight kills in less than forty-eight hours, it is necessary to give an amount exceeding one one-hundredth of the body weight to accomplish this result in the rat. This resistance is not dependent upon the antitoxic properties of the blood serum or upon the power of leucocytosis, but is the result of the natural immunity of the bodily cells.—*Gazette des Hopitaux.*

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I can candidly say that Sinkina is the best remedy for malaria I have ever used.

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In a very severe case of malaria I put my patient on one teaspoonful of Sinkina every three hours. When she began taking it her fever was running to 105 degrees. In three days the fever was completely gone and she was able to sit up.

NOTE: Nine months after writing the above, Dr. May wrote; There has been no return of the malarial trouble in the case reported since it was cured with Sinkina.

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I have used Sinkina in two cases of malaria, both of which responded favorably and are now apparently well without other treatment.

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Sinkina has proven all that you claim for it—a specific for malaria. I like it also because it is pleasant to take, and does not create the injurious effects that follow the use of quinine.

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I began prescribing Sinkina more than one year ago. Since then I have used it in more than one hundred cases with happiest results. It has proven thoroughly satisfactory to me as a specific for malaria. In no case have I seen any of the disagreeable effects always obtained when using quinine.

DR. G. H. HERRING, Slocomb, Ala.

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DR. J. D. RUSK, Orlando, Fla.

I made use of Sinkina in a case of chronic malaria with good results. In this case the patient was 70 years old; heart action was weak, liver hard, and spleen enlarged. The patient has had no subsequent return of the fever. I have also used Sinkina in two cases of latent malaria with good results.

DR. C. J. HERTICH, Genevieve, Mo.

I demonstrated Sinkina upon a case of severe tertian fever which had resisted quinine and arsenic for several months. The use of two bottles of Sinkina dissipated every symptom of malaria without any of the after effects which usually follow the use of quinine. There has been no return of the fever and the man is apparently in perfect health.

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Elimination of Salvarsan.

Caffarena (La Pediatria) found that salvarsan was eliminated through the milk whether it was given endovenously or intramuscularly; if given through the veins elimination takes place for two or three days; if given intramuscularly it takes from ten to twelve days; hence if an effect is desired on the suckling infant it is better to give the drug by the intramuscular method, and all the more as after endovenous administration to the mother bad effects have been noticed in the child. Probably this is due to the setting free of a large amount of endotoxin as a result of the very rapid destruction of spirochætæ which follows direct venous ingestion of salvarsan. Indirect antisymphilitic treatment of the child through the mother would not suffice for a severe case of congenital syphilis; in such a case some direct treatment, whether by injection or otherwise, of the child is necessary.—British Medical Journal.

Effects of Neo-salvarsan.

Reactions following the intravenous injection of neosalvarsan are in a great majority of instances due to bacterial or chemical impurities in the water used to dissolve the drug. G. L. Dreyfus therefore advises that the water be doubly distilled shortly before use. The apparatus should be made entirely of Jena glass without any metal and the condenser should be removed after eight to ten weeks. Distilled water is to be used in sterilizing the apparatus and the vein is punctured by means of a platinum iridium needle. When all these precautions were observed, a slight reaction was obtained in only 9 per cent. A good deal of confusion still exists as to the proper dose of the drug. The author generally uses two infusions a week of 0.6 to 0.75 Gm. until a total amount of 7.5 Gm. is injected, and at the same time employs mercury in the form of inunction or injection. Toxic symptoms are exceedingly rare and are more often due to the water than the drug. This applies particularly to the eruptions. It is best to begin with smaller doses, until the patient's tolerance has been tested. If a reaction occurs, two days without fever should pass before a second dose is injected. Arsenical polyneuritis is a very rare complication, but treatment should be interrupted with the first symptoms. The old salvarsan is in general more potent than neosalvarsan. The latter drug is particularly indicated in luetic meningitis, specific aortic changes and luetic, vascular processes in the brain and ophthalmia with non-specific nephritis. In the uncomplicated syphilitic affections of the central nervous

system, salvarsan is to be preferred, since it is the more potent drug and has a more pronounced effect upon the sero-reaction. In some cases it may be desirable to use both drugs.—Muench. med. Woch.

New Bulletin.

The Fourth District Medical Society of the State of North Carolina has commenced the publication of a monthly bulletin. Dr. William H. Smith, Goldsboro, president, and Dr. Michael M. Saliba, Wilson, secretary of the organization.

Salvarsan in Non-Syphilitic Diseases

Salvarsan and neo salvarsan are also indicated in local conditions caused by spirilla. This includes Plauth-Vincent's angina, gingivitis simplex and mercurialis, certain forms of glossitis, ulcers due to scurvy, noma, periodontic abscesses, pulpitis, pyorrhea alveolaris. In many other ulcerative processes, in the mouth and pharynx, good results may be expected if there is a secondary infection with spirilla, no matter what the original condition. Accordind to Gerber, a good effect has also been reported in pemphigus of the mouth, foot and mouth disease, carcinoma of the tongue and scleroma. At first the drugs were injected intravenously as for syphilis, but a better way is the local application. A 5 or 10 per cent. aqueous or glycerin solution is used or else the powder is insufflated directly. A good way is to impregnate an applicator with glycerin, dip it into the powder and then rub it thoroughly into the ulceration.—Muench. med. Woch.

Sugar as a Heart Tonic.—Goulston, in The British Medical Journal, says that Sir James Sawyer gives very favorable reports regarding the effects of cane sugar in cases of dilatation of the heart in the aged. Sir James Sawyer has also prescribed sugar in wasting disorders, some forms of anæmia, adynamic rheumatism, and the neurasthenia of neuratic subjects with such excellent results as increase of weight, power, strength, and vigor, without the production of sudden excitement. The patient is advised to carry with him about half a pound of lump sugar daily and eat it from time to time except just before meal. Sir James concludes his paper by saying that henceforth we must think of members of the sugar group as sustainers and developers of the heart musculature in failure of compensation and in a large variety of cardiovascular troubles. He advises obstetricians to prescribe it in cases of uterine atony and as a general tonic and food throughout pregnancy. Pure cane sugar should be used, a simple test for which is its luminosity when two lumps are rubbed together in the dark.

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Treatment Gastrointestinal Hemorrhage.

The large percentage of cases in which serious gastrointestinal hemorrhage is preceded by the appearance of occult blood is emphasized by the author. In his cases of gastric cancer this sequence occurred in 94.5 per cent. Such occult bleeding should be dealt with as though it were a marked hemorrhage. The patient should remain in bed on a diet consisting of 3 or 4 liters (quarts) of milk, with Carlsbad water, with or without salt, until no occult blood can be detected for three or four days in succession. Where the disorder present is cancer, and visible hemorrhage takes place, the latter, though not often serious at any given time, is likely to continue for an indefinite period. If operative treatment is not possible, liquid food and eggs should constitute the chief elements of the diet.

Enlargement of the liver or spleen in conjunction with gastrointestinal hemorrhage should also suggest syphilis. If the Wassermann proves positive, excellent results from specific treatment may be obtained.

In severe gastrointestinal hemorrhage from whatever cause, the food allowance should be strictly limited to cold tea, ice-cold milk or egg-white jelly, taken regularly in very small quantities. Nutrient enemas are of little value. Normal saline

solution introduced into the bowel by the drop method, however, is of great value. One liter should be given each day, and to it 15 drops of 1:1000 epinephrin solution may be added with advantage. An ice-bag may also be employed. In severe cases gelatin should be given, though its utility is doubtful. Rectal injections of calcium chloride may be given. Where palpation shows that there are clots in the stomach and these are maintaining local irritation, the organ should be washed out with ice-water.

In hemorrhage due to hemorrhoids, the author sets great store on rectal injections of pure crystallized calcium chloride. Given systematically such injections have proven so efficient in his hands that for some years he has not had occasion to recommend operation to any hemorrhoid cases for bleeding alone.—Boas, Berliner klinische Wochenschrift.

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Flixir Paraldehyd (see page xiv this issue) which is an elegant preparation.

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Hernia.

The author's cases of hernia of all varieties excepting femoral hernia, done since the introduction of filigree implantation number 314—263 inguinal and 51 umbilical or ventral. Of the inguinal cases, 106 were treated by filigree implantation, and of the umbilica-ventral, 40. Some patients had undergone repeated operations ineffectually and many had been refused operation more than once; 11 were over the age of 60, the 2 oldest being 72 and 67, 27 between 50 and 60, and 48 between 40 and 50, the remainder being under 40.

Though some of the hernias were of vast dimensions, in all the cases there were but two recurrences, both in cases of inguinal hernia. A filigree implanted and resulting in a primary union is, after a short time, so absolutely incorporated with the tissues that it can only be removed by excision en bloc, or by extraction of its wires one by one.

Among the 40 ventral cases there were four deaths, one from bronchopneumonia, one cardiac failure, and one from ileus. All were in very stout patients. Among the inguinal cases there was one death, which was due to ileus. This case had only been done at the urgent request of the patient, who realized the grave risk he was incurring.

The author concludes that few, if any, hernias, whether inguinal or ventral, can now be considered incurable. In filigree implantation is to be found the only true radical cure (for the severe cases). The use of filigree is attended by a slight increase in the danger of sepsis, but suppuration is not an indication for the removal of a filigree. Wires displaced into a sinus should be removed without disturbing the filigree. No belt or truss should ever be applied on the top of an implanted filigree. For the reduction of very large inguinal hernias and the avoidance of paralytic ileus the Trendelenburg position should be used the abdomen opened, and the bowel withdrawn from within aided by pressure from without. In ventral hernias following appendicular abscess it is absolutely essential that the appendix be removed before implantation, if this has not been already carried out. It is important in dealing with a gigantic hernia that every precaution should be taken for the comfort and safety of the patient. There must be skilled assistance, full facilities for asepsis and a good light; for choice, spinal analgesia should replace general anesthesia. Mc Gavin (Proceedings of the Royal Society of Medicine.

Pulmonary Tuberculosis.

The author produces evidence distinctly in favor of the use of tuberculin in connec-

tion with sanatorium treatment. With early cases (61 in number), the 50 per cent. of cases treated without tuberculin who lost their tubercle bacilli was increased to 66.6 per cent. upon the addition of tuberculin. With the moderately advanced cases (157), the 16.8 per cent. treated without tuberculin who lost their tubercle bacilli was increased to 33.8 per cent. by the addition of tuberculin. With the very advanced cases (67) there was no difference between the tuberculin-treated and non-tuberculin-treated cases. Now and then a case of very advanced disease would lose its bacilli, but for the most part alleviation of symptoms and some prolongation of life was all that could be looked for in the way of improvement.

The addition of tuberculin to sanatorium treatment thus increases the chances of clearing the sputum of tubercle bacilli by some 16.6 per cent. in the case of patients suffering from early disease, and by some 17 per cent. in the case of patients suffering from the disease in its moderately advanced stages. This is a material gain, the significance of which is emphasized by the excellent after-history records of the patients who lost their bacilli as the result of treatment.—Bardswell, in *The London Lancet*.

"Whatever be the nature of rheumatism and gout, every practical physician realizes that they are amenable to treatment and that it is a matter of as much importance to open the doors by which the poison goes out as to close those doors by which it goes in. Hence prompt and thorough elimination must be obtained through the liver, the kidneys, the bowels and the skin."

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Case of Ossification in the Brachialis Anticus.

Corner reports the case of a young man who fell on his hand a few months ago, fracturing the lower end of his radius. There was no complaint of any injury or pain in the neighborhood of the elbow-joint. Later the patient discovered a painless lump in front of the elbow. A skiagram showed that this lump was due to some ossification in the brachialis anticus muscle. Presumably this was the result of a partial rupture of the muscle, done unconsciously at the same accident.—Proceedings of the Royal Society of Medicine.

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School Children Below Par.

The difficulty some pupils have in keeping up with their school work is so obviously due to physical deficiency that even parents recognize the disadvantage under which such children labor. These little patients show a listless manner, and only with marked effort do they maintain a creditable standing in their classes. It is in such instances that Cord Ext. Ol. Morrhuæ Comp. (Hagee) has a particular field of usefulness. Being a tissue food in every sense of the word, its administration adds a vigor which quickly manifests itself in a large capacity for both physical and mental effort. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) enriches the blood stream and brings about an increase in bodily weight. A superior feature of this preparation is its palatability, as a result of which it may be continued over long periods of time without the production of nausea or other annoying consequences.

"Biologic Products and How to Use Them" is a little booklet produced by the Abbott-Slee Laboratories, Chicago, Ill., which gives much information that is valuable on the subjects Antitoxins, Serums, Stock Bacterins, Autogeneous Bacterins, and Smallpox Vaccine. The little booklet is very interesting as well as instructive. A copy of it will be mailed to any of the readers of the Journal on request without cost.

Raising the Vital Index of Resistance.

The innate defensive and reconstructive forces of tissue cells are often weakened or held in abeyance by pathologic processes. In other words, sepsis and septic products inhibit or completely destroy the inherent resistive and restorative powers of the body.

Careful therapeutic investigation and a wealth of clinical data have shown conclusively that through the influence of Burnham's Soluble Iodine it is possible to raise the vital index very substantially, and not only destroy invading bacteria and neutralize their toxic products, but what is no less important to augment the physiologic forces of resistance, reconstruction and repair—in brief, to qualify the tissues to win their fight invading bacteria and neutralizing their pernicious products, but by materially augmenting the physiologic forces of resistance, recuperation and repair.

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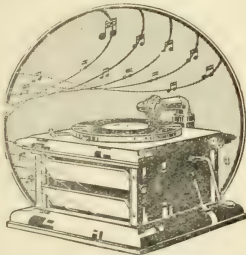
Discussing ulcers of the rectum in Keen's Surgery, Vol. VI, page 626, Robert Abbe, of New York, remarks that "in the treatment of syphilitic lesions salvarsan seems to offer wonderful results. In cases that have resisted mercurial treatment it certainly should be used. Its primary use (after diagnosis by the Wassermann reaction) is widely advocated."

Prof. Edward Martin, of the University of Pennsylvania, writing on the treatment of syphilis in the latest volume of Keen's Surgery, Vol. VI, page 111, says: "Salvarsan is indicated in all stages of syphilis. Given in full dosage and repeated in seven days, it produces its maximum safe effect, and if used in the early stages of chancre seems capable of producing an immediate and permanent cure. The lesions of syphilis yield more promptly to salvarsan than to mercury, and the Wassermann reaction becomes negative in a larger proportion of cases. It is generally accepted that salvarsan should supplement mercury, the latter being given in doses as large as are compatible with bodily and mental vigor,



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preservation of appetite and digestion, free elimination, and the holding of the normal weight."

Chetwood, of the New York Polyclinic Hospital, in his new work on Urology, says: "The use of salvarsan in urogenital syphilis has been followed by brilliant results and no doubt the introduction of this treatment will in many instances revolutionize the methods adopted and take the place of the older remedies to a considerable degree. It has been found that syphilitic children bear the treatment very well, in spite of the earlier expectations to the contrary."

Therapeutic Action of Metals Upon Carcinoma.

The very interesting and important observation has been made by H. R. Gaylord that the addition of small amounts of metallic salts to the water in which fish are kept will have a markedly inhibitory effect upon the growth of malignant tumors. Decided results were thus obtained with mercury bichloride in a concentration of one part to 4 million of water and with arsenic pentoxide 1:300,000. Iodine and tetrabromcreosol are also very effective. An action is apparent after one to two days and in some cases the tumor had disappeared entirely after 30 days. Microscopically, there were found hemorrhages and necroses and, particularly in case of the thyroid, a rapid return to the normal structure. From these observations it is of course impossible to obtain any suggestions as to the treatment of tumors in man but the fact remains that the salts of the more poisonous metals undoubtedly have a restraining influence upon the growth of malignant tissues.—Berl. klin. Woch.

Pediculosis Capitis.

For the extermination of pediculi, especially in little girls, A. Whitfield recommends the following treatment:

The patient is placed on her back on a bed with the head hanging over the edge so that the hair will rest in a basin containing a solution of three drams of phenol in a pint of water. The solution is poured through the hair and caught in the basin until the hair is thoroughly saturated. Special attention should be paid to the hair over the ears and at the nape of the neck. The treatment is continued for ten minutes and then the hair is allowed to drain, but must not be dried or even thoroughly wrung out. A thick towel or a large piece of flannel is then wrapped about the head to form a turban. After an hour the hair may be washed in plain water or simply allowed to dry. The phenol being volatile soon

disappears. The author states that this treatment does not injure the hair and that it kills the ovum as well as the pediculus.—London Lancet.

Treatment of Gonorrhea.

In combination with local treatment, O. Nitze, of Berlin, has used santyl with good results in the treatment of acute and chronic gonorrhea. He reports also that he has used the drug in non-gonorrheic affections, from simple bladder disturbance to cystitis of a marked degree. The author describes two cases in detail, the first that of a woman who had suffered for a decade with leucorrhea, menstrual disturbance and trouble in urination, and the second case, a woman 50 years old, who had an inveterate vaginitis, endometritis and pronounced cystitis. In the second case the urine contained pus and had a disagreeable odor. Irrigation of the bladder with a solution of potassium permanganate seemed to have very little effect. Under santyl the acute bladder symptoms disappeared in a short time and the urine became clear.—Therap. d. Gegenwart.

Effect of the Opium Alkaloids.

E. S. Faust has experimented with opium alkaloids in various combinations and finds that all the active principles are not necessary to produce the typical opium effect. The only indispensable ingredient is morphine. The combination of morphine with the other alkaloids does not reduce but rather enhances the narcotic effect of morphine upon the sensory centers in the cerebrum. The paralytic effect of morphine upon the respiratory center can be combated by the synchronous, stimulating effect of other alkaloids notably by thebaine, which in this respect acts like strychnine. The opposite holds true for the vomiting center, which is stimulated by morphine and depressed by the other alkaloids. It seems that narcotine, narceine and papaverine either alone or in combination have no effect upon the tonus of the stomach.—Muench. med. Woch.

Iodipin in Prostatitis.

Prostatitis is a common and very disagreeable complication of gonorrhea which may delay the cure for many weeks. The methods commonly employed for treating this condition are prostatic massage, hot rectal irrigations and the insertion of suppositories containing ichthyol and potassium iodide. Massage frequently does more harm than good, particularly if practiced before the third week; the suppositories not rarely give rise to tenesmus. The patient may

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also find it very difficult if not impossible to resort to the irrigations. L. Fischel has obtained a much better therapeutic effect from iodipin applied in the form of a rectal injection, both in recent and in old cases where considerable infiltrations were found in the gland. As a rule 10 Cc. of a mixture of one part of iodipin 25 per cent. and two parts olive oil are injected into the rectum every day, or, in mild cases, every second day. An improvement will be noticed within a week; the gland diminishes in size and the second portion of urine begins to clear. As a rule the prostatitis is cured in two to three weeks or else small nodules remain which can easily be dissipated by massage or hot irrigations. According to the author only very few cases resist this treatment.—Muench. med. Woch.

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Rectal Gonorrhea in Children.

Kaumheimer, of the Gisela Children's Hospital, of Munich, considers it surprising that in the text-books on pediatrics rectal disease of gonorrheal origin receives practically no mention, not even in the chapter on complications of gonorrheal vulvovaginitis. Furthermore, in the more



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extensive contributions on vulvovaginitis in infants the possibility of its occurrence meets scarcely any consideration.

The rectal infection in most instances is due to an overflow of the frequently very profuse vulvar secretion, which when the child is lying on his back passes along the perineum and into the anal opening. Occasionally it may be a direct infection through a thermometer or the nozzle of a syringe.

The subjective symptoms of rectal gonorrhea are usually slight and absent in the majority of cases. This is probably the reason why so few cases are observed, and why the disease is so frequently overlooked. Some children, however, complain of frequent desire to evacuate the bowels, which perhaps is due to a collection of secretion behind the sphincter ani. In a case observed by Kaumheimer the number of stools was increased, but there was no actual tenesmus. Other symptoms are mentioned by different authors, such as pruritus, darting pains, a feeling of heat, pain on defecation. These, however, are not characteristic, since they may be due to fissures, rhagades, or inflammation with ulceration of the anal region. In the author's case the disease ran a completely painless course, without fever or malaise. In all children with vulvovaginitis it is necessary to daily inspect the stool, besides examining the rectal mucus for gonococci. The rectal secretion must be regarded as suspicious if it contains an abundance of pus, many leucocytes, and a few bacteria. In the author's case the secretion at first was thick and stringy. Usually the fecal mass was covered in some places by firmly adherent, gray, flocculent and tenacious deposits. Later the discharge became more mucopurulent, softer and more viscous. From the frequency of positive gonococci findings in the rectum in persons suffering from vulvovaginitis it may be assumed that either these organisms commonly do not give rise to any great inflammatory phenomena or that the rectal inflammation produced by them may get well spontaneously.

As regards the treatment Kaumheimer advises that at least in young children intestinal or rectal irrigation should be avoided. Suppositories of ichthyol and nitrate of silver or injections of one of the organic silver preparations (such as protargol, 3 to 5 per cent.) have been employed, or injections of small amounts of tannin solution, 1 per cent. Thyresol, one-half tablet, 3 times daily, has proved of benefit and also served to regulate the bowels.—Muench. med. Woch.

The Present Position of Uraemia.

There are, writes Phillip (Prager med. Wochenschrift) two main theories as to the origin of uræmic convulsions. One view is that these are caused by the increase of bodies in the blood normally present, but which in health are excreted by the kidneys. The increase of these bodies, or of one of such bodies, in the blood determines the fit. The other theory is that uræmia is caused by poisons which do not normally arise in the body, but which are formed by the diseased kidneys. V. Jaksch and others generally found in uræmia an increase of urea, although in a few cases there was no such increase. He writes: "There are two groups of cases: one where there is an increase of urea in the blood and the freezing point of the blood serum is consequently lowered; and a second group where there is no such increase and the freezing point is unchanged." Strauss concluded that it was generally derivatives of albumin metabolism which played the chief part in uræmia. Others also agree with Strauss that in this condition there is a large amount of residual nitrogen as a rule. But while urea and residual nitrogen were not invariably present in uræmia, an investigation of other products of retention was urgent. Beck and Heringham observed that calcium salts could give rise to uræmic-like convulsions, and Widal, as is well known, took to chlorium salts as the malefactors. But each of these views have been rejected by further experience as insufficient. So far none of the substances which can form urea has been proved to cause true uræmia. Nowadays it is held by some that these substances serve simply as the index of some hitherto unrecognized retained poison. Jaksch in his latest writings regards uræmia as an auto-intoxication; it is not necessary, he says, to look for a specific poison. All the tissues and the blood are impregnated with urinary salts, especially urea. (An attack is apparently determined when saturation point is reached, although v. Jaksch is not quoted to this effect. Recent work tends to abandon auto-intoxication in favor of the theory of inhibitory hormones. Auto-intoxication belongs to the old guard, which is, however, not even yet engaged in its rearguard action.)—The Universal Medical Record.

Gangrene Among Troops on Active Service.

Wieting, who first practiced arterio-venous anastomosis as a prophylactic in cases of threatened gangrene, describes a form of gangrene which he met with very frequently among the troops on active service in the

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recent Turkish War (Zentr. f. Chir.). The condition was met with in troops exposed in wet trenches or on sentry duty to temperatures which, although low, never reached the freezing point, and was especially frequent in those who were badly nourished or who suffered from dysentery or cholera. While the condition usually appeared about two days after exposure, it was not infrequently found in men who were healthy at the time of exposure, but who subsequently

developed dysentery or cholera and showed signs of gangrene as long as six or ten days after being chilled. The first symptoms were itching or smarting in the toes and feet, followed by redness with swelling and œdema, the affected parts finally taking on a blue color, with the formation of blisters containing serous fluid. In cases with wounds the phenomena of infection were added. A characteristic feature of the gangrene was its slow progress.

The sequence of events seemed to be a vasomotor paresis due to prolonged chilling, followed by stasis and thrombosis. In many cases the extent of the gangrene was limited to the tips of the toes, and the main indication in treatment is to delay operative measures until the extent of the gangrene is quite clearly shown by the formation of a line of demarcation, when plastic operations immediately above the affected parts should be carried out. While waiting for the demarcation line to form, treatment should be carried out on ordinary lines, with elevation of the limb and dry aseptic dressings.—Edin. Med. Journ.

Trigger-Knee.

Billet applies the name "genou a ressort" to a rare condition which has been described by R. Jones under the name of trigger-knee, and by Thiem under the name of "schnellendes Knie." The condition is characterized by a sudden arrest of the movement of the knee during flexion or extension; this arrest is followed by a sudden jerking and lateral movement of the leg and the production of a clicking sound. The condition is distinct from that of displacement of the semilunar cartilages of the knee, and is apparently the result of a laxity of the joint capsule, usually traumatic, but sometimes of congenital or inflammatory origin.—Gazette des Hopitaux.

Abderhalden's Reaction in the Early Diagnosis of Carcinoma.

II. Ludke states that in many cases of carcinoma in the early stages this reaction is positive if one employs extracts of carcinoma and the serum of cancerous patients. But the reaction is not absolutely specific, for occasionally positive reactions are obtained in non-cancerous individuals.—Gazette des Hopitaux.

Salvarsan Given Per Rectum.

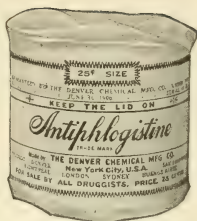
In children, the intravenous injection of salvarsan may be very difficult since the veins are small or invisible and since the patients often cannot be kept sufficiently quiet for the operation. Salvarsan, given per rectum, is not absorbed with sufficient

rapidity to be recommended for the syphilis of adults, where an energetic treatment is in place. It is, however, an excellent method of treating the less virulent syphilis hereditaria tarda or non-syphilitic affections, such as chorea minor, anemia and afebrile tuberculosis. The dose employed by Weill, Morel and Mouriquand is 0.1 to 0.4 Gm. The salvarsan is placed in a bottle with about 50 glass pearls and 40 Cc. of distilled water and is shaken until completely dissolved. Fifteen drops of a 15 per cent. solution are then added. This concentrated solution is then diluted with 100 Cc. $\frac{1}{2}$ per cent. salt solution and 5 to 10 drops of laudanum are added. The injection should be given as high up into the rectum as possible and should be retained at least 4 hours.—Lyon medical.

Antiquity of the Hunger Strike.

History repeats itself. The hunger strike is not an invention of the suffragists but is a custom of great antiquity. John Scott, in the sixteenth century, while confined in David's Tower in Edinburgh Castle, abstained from meat and drink for thirty-two days in order to show that he was under the special protection of heaven. The procedure of fasting was a legal institution of ancient Ireland. Having exhausted all legal means to conquer the resistance of a powerful debtor, his creditor had only one means of constraint left to him—that of standing before the door of the debtor and of refusing to take nourishment till the debt had been paid. If the debtor allowed the person fasting to die of hunger he was responsible for his death and had to pay his family a considerable indemnity in addition to the original debt. This was called "fasting *against* or *on* a person." Dom Gougau adds that in no Christian society to his knowledge has there been made such frequent and daring use of this curious process as in medieval Ireland. The custom is frequently mentioned in the Breton laws. Fasting seems to have been practiced when it was desired to turn a heathen king into a Christian, and the monarch, if hard of heart, counterfasted as a means of protecting himself against conversion. It is recorded that St. Patrick "fasted upon" Loegaire, the heathen overking of Ireland, until the latter embraced Christianity, and in accordance with the superstitions of the times the king and his family felt it incumbent upon them to fast at the same time until this test of endurance was won by the saint. The custom of hunger-striking for the same purpose was formerly common in India, but it is now almost obsolete. It is known in the East as dharna (or dhurna) baithna, or "sitting dharna." It was chiefly resorted

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to in order to force payment of a debt. The creditor would sit at the debtor's door and taste no food until his claims were satisfied. If the debtor allowed the creditor to starve, it was believed that he laid himself open to supernatural punishment, especially if the starver happened to be a Brahmin; accordingly, Hindus of lower caste would sometimes engage a Brahmin to starve for them.—British Medical Journal.

The Effect of Stimulating Cell Nutrition.

In many conditions of a chronic character improvement may be expected to follow the use of agents calculated to influence nutrition of the individual cells. Thus, if the cells be stimulated to better assimilation and elimination, diseased states due to interference with these normal functions of the cellular constituents of the vital organs must of necessity undergo a change, for the underlying and continuing cause is being altered. The drugs usually employed for this purpose are those termed the alteratives, an efficient representative of which class is Iodia (Battle).

Iodia is a combination of iodide of potash with the active principles of the green roots of stillingia, helonias, saxifraga and menispermum. It has been found in severe clinical tests to exert an influence on the vital functions, the explanation of its favorable effect being sought for in the stimulating action of its several constituents on the normal processes of the body's cells. In chronic gout and rheumatism, glandular diseases and chronic affections of the skin Iodia will offer evidence of its therapeutic value.

Treatment of Erysipelas by Vaccine.

Yoshihiro Takaki (Sei-i-kwai Medical Journal) has treated 16 cases of erysipelas by vaccines. In some of the cases a stock streptococcus vaccine was used, but in the majority of the patients the vaccine employed was autogenous. Although many of the cases were very serious, in no instance did death result. When the condition came early under treatment the illness was, in Takaki's opinion, shortened, and in certain cases the effect was almost instantaneous. Auto-vaccines were found more efficacious than stock vaccines. The exact dosage is not given, but injections appear to have been made at intervals of two days. A study of the cases in detail suggests that the stock vaccine was of little, if any, value. It is true that the inflammatory process was apparently checked abruptly in some cases, but erysipelas is a disease of such uncertain duration, and so often terminates by crisis, even when no

specific treatment is used, that we are not very impressed with the results. On the other hand the use of the auto-vaccine was somewhat more successful. Here again, however, if we apply the test of the number of recurrences, the treatment does not seem convincing. Three patients suffered from relapse—a high proportion even for untreated cases. On the whole, therefore, granting that a number of severe cases did extremely well, it would be unsafe to lay very much stress on the value of a method of treatment which is still, after all, only in the experimental stage.—Edinburgh Medical Journal.

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

The Nervous System.

Positive results were obtained by the author in the course of an examination of 200 brains from general paralytic patients and 12 spinal cords from cases of tabes dorsalis. In the former series the pale spirochete was discovered in 48 cases, ranging in age from 29 to 75 years. In one of those cases the affection had been even of six years duration. The organisms were found especially in the frontal lobe, the Rolandic region, sometimes in the hippocampus. In one case they were detected in all portions of the brain, though in greatest number in the motor areas. They are more numerous in the cortex than in the white matter, and are dispersed in groups between the nerve cells and neuroglia fibers. They very rarely occur in the neighborhood of blood vessels and are almost never situated in the vessel walls.

In the cases of tabes, the search for the spirochetes proved more arduous. The



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organisms were found only in 1 case, in the posterior columns of the cord. Noguchi in *The Munchener Medizinische Wochenschrift*.

Neuritis.

In employing electricity systematically for diagnostic purposes in neuritis, the author was led to the conclusion that the neuromuscular abnormality in this condition is never localized, but tends essentially to spread. Even lesions clearly peripheral in origin and unilateral always become bilateral, and the nerve-centers, especially the cord, are regularly implicated.

In view of these conditions, the author departed from the usual method of applying the galvanic current in these cases, and began to employ a more diffuse treatment with low intensity of current per unit of area. The electrodes, consisting of absorbent cotton wrapped with gauze, and 3 or four centimeters thick, are made into long bands, according to the extent of the parts to be exposed. An electrode as long as 120 centimeters (4 feet) is used for the lower limbs. These electrodes are placed paralled in pairs along the limbs or the spinal column, and receive the current throughout metallic bands of appropriate length. Their surfaces vary from 600 to 2000 square centimeters, and the intensity of current employed easily attains 60 to 80 milliamperes for one arm and 100 to 125 milliamperes for one lower extremity. Generally the two lower limbs are simultaneously treated, and the combined intensity may be carried as high as 300 milliamperes. The density of current per unit of surfaces remains low, however,—0.1 to 0.2 milliampere at the most. The sittings, which are readily borne by the patient, can be made to last three-quarters to one hour, and be frequently repeated. The current is propagated transversely to the axis of the nerves, and not longitudinally as in the procedure hitherto generally carried out.

In nearly 600 cases of neuritis, of all grades of severity, thus treated by the author in the last five years, complete recovery, verified by electrodiagnosis, was regularly obtained where the patients could devote sufficient time to the treatment. Even certain forms of myelitis—traumatic in particular—were considerably benefited by the treatment. Hirtz in *The Academic des Sciences. Paris*;

Anesthesia.

Discussing first the causes of such rigidity the author refers to the fact that the presence of food or much fluid in the stomach sets up persistent straining. Faulty anesthetiza-

tion, e.g., failure to choose an anesthetic appropriate to the patient, operation and position, uneven or too hurried induction, unduly light anesthesia, etc., may be expected to cause trouble. Acute appendicitis or a gastric ulcer might also be the cause of rigidity. Certain positions, e.g., on the side with a large, round supporting cushion, with or without an elevating cushion, will promote abdominal tension. The Trendelenburg position not only causes some tension, but also disturbance of the respiration by impeding the action of the diaphragm. Traction on the mesentery or broad ligaments, enucleation of an adherent prostate, injection of a bladder ulcerated from tuberculosis are especially likely to cause trouble. Finally, hiccough may begin by manipulation in the region of the diaphragm. For prevention of abdominal rigidity during anesthesia, means should, when practicable, be taken to get the stomach empty and keep it empty, particularly in emergencies and when there is intestinal obstruction.

With the patient in the supine position, the shoulders, if this be not inconvenient to the surgeon, should be raised—the one from which the head is turned rather more than the other. In the lateral position the uppermost arm must be supported on a rest. In the Trendelenburg posture the shoulders should always be supported, and the weight of the head taken off as much as possible by one or two pillows, which may sometimes with advantage rest on the anesthetists' knees.

Spinal analgesia usually abolishes the trouble, besides keeping the bowels still, and is especially useful for this purpose in some pelvic operations. It should, however, be combined in most cases with general anesthesia, which may be light when it would otherwise need to be deep.

After hypodermic injection of omopon or morphine and atropine the author has often found absence of reflex rigidity, e.g., in hysterectomies, where it might otherwise have been expected. It is worth while to inject (if previously omitted) just after induction or even at the onset of rigidity, for an effect generally follows in about ten minutes. The patients will, of course, need careful watching after operation.

Ether by the open method or a chloroform and ether mixture (according to the state of the patient and the stage of the operation) are usually more effected than pure chloroform, and can be pushed with less risk. Whatever anesthetic be employed it is of the first importance to attend to the respiration, and, if this becomes unsatisfactory, to apply the appropriate remedy. Oxygen is often valuable, but should not

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be used merely to counteract cyanosis dependent on causes otherwise remediable. Thus, one should not give ether from a closed inhaler to a full-blooded, elderly person, and then turn on oxynen to alleviate its bad effects.

Reflex rigidity from surgical procedure is accompanied by more or less spasmodic closure of the larynx and retraction of the tongue, and efforts must be made to maintain a free airway by such means as pushing forward the lower jaw, keeping out the tongue, and introducing a tube between the tongue and palate. Non-aeration increases rigidity, the extraordinary muscles being called into action, so that a vicious circle is formed. The depth of the anesthesia must be cautiously increased. Reflex

disturbances should, of course, be minimized by making an adequately long incision by clamping and cutting adhesions when possible instead of tearing them, and by avoidance of rough handling.—Mortimer, Clinical Journal, London.

The Pigmentary Cirrhoses.

Chalier and Josserand conclude from their investigations that the pigmentary cirrhoses should not be considered apart from other pathological conditions associated with a ferruginous pigmentation of the organs of the body. In spite of the opinions of former authorities, the pigmentary cirrhoses have no special individuality, the iron pigment deposited in the liver being the result of an hemolysis.—Revue de Medecine.

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Annual Meeting at Old Point Comfort, Va.
December, 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.

Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Mobile, Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.

R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.

W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Olando, Florida,
May, 13, 1914.

J. D. Fernandez, M. D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Baton Rouge, La. 1913.

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B. A. Ledbetter, M. D., Pres. New
Orleans La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Vicksburg, Miss., 1913.
Date not yet decided.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

S. W. Glass, M. D., Pres., Dublin, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N.M.
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SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

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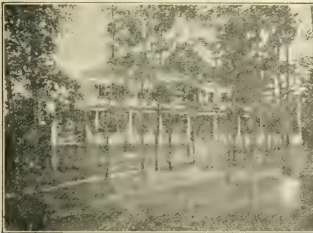
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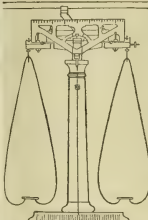
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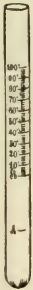
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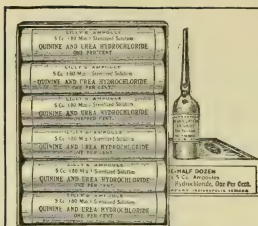
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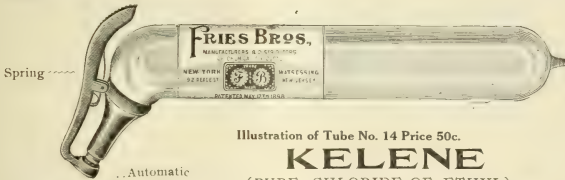


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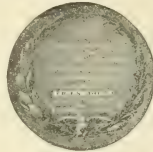
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The Charlotte Medical Journal

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No. 4.

The Administration of Tuberculin by the General Practitioner.*

By Drs. D. W. and Ernest S. Bulluck, Wilmington, N. C.

In recent years tuberculin has slowly and certainly arisen, so to speak, from its own ashes. We now believe that its past condemnation was due to the poor selection of cases, over-dosage and over expectations. In the light of our present knowledge tuberculin is to be considered not a "Cure" or "Specific" but as a valuable adjunct to other remedial agents of known efficiency. While its results have been variously valued, its dangers have always been overestimated.

After a study of the varying reports of many sanitariums one is justified in concluding that after a given number of years it is found that the patients treated with tuberculin have a larger working and earning capacity than those who were similarly treated, omitting the tuberculin. Further, a larger percentage of those treated with tuberculin are alive. While the tuberculin treated cases do not brilliantly surpass those cases where the treatment was the same—save for its use—the advantage is great enough to be coveted by those who would bring to bear every available force against tuberculosis. That the rank and file of mankind may share the virtues of this remedy, its administration should not be confined to those who give all of their attention to the treatment of this disease, for they see only the smallest part of the sufferers. The general practitioner must meet the situation by brushing up on the subject and using the remedy where, in his opinion, it will be of value.

The average text book tells but little of the administration of tuberculin and the space devoted to it is generally so used to tell of precautions and dangers that one hesitates before beginning its use. While we are frank to say that knowledge and equipment will improve the results we are firmly of the opinion that the drug may be used, by one totally unfamiliar with its application, without detrimental effect, provided ordinary good judgment is exercised.

Effect on the Body.—When sufficiently large doses are given certain tissue changes occur. These are summed up under the general term "Reaction." A reaction occurs in any or all of three ways. The most

important in treatment is the focal reaction which occurs at the infected area in from twelve to twenty-four hours after the injection. At this time the vessels surrounding the focus become congested, the blood stagnates and an increased extravasation of its solid and liquid elements occurs. That this state promotes fibrosis is shown by comparison of similar areas from patients not treated by tuberculin. The general reaction causes such systemic symptoms as fever, pain in the back, joints and extremities, headache and general malaise. Such a reaction makes the patient feel badly, is without beneficial effect and the dose should be so regulated as to avoid it. The local reaction which occurs at the place of injection is most important as regards dosage, for the focal reaction cannot be estimated and the local one occurs before or with doses too small to elicit a general reaction. This local evidence consists of redness, tenderness, pain and swelling at the site of the puncture. The size of the area depending upon the severity of the reaction.

It is upon the symptoms that the most obvious results are seen. Early in the treatment the patient experiences a certain sense of well-being that did not previously exist. Where mild fever exists it is very favorably effected.

Cough, the appetite and digestion are greatly improved, if their derangement is due to toxemia. The organisms disappear from the sputum more rapidly than when tuberculin is not used. The tendency to hemorrhage is not increased, nor is it diminished except by improving the general condition. The amelioration of those symptoms which are due to toxemia leads us to believe that the presence of tuberculin excites the formation of uniceptors capable of anchoring the toxins dependent upon the infecting organisms and thus relieving the body of their effect.

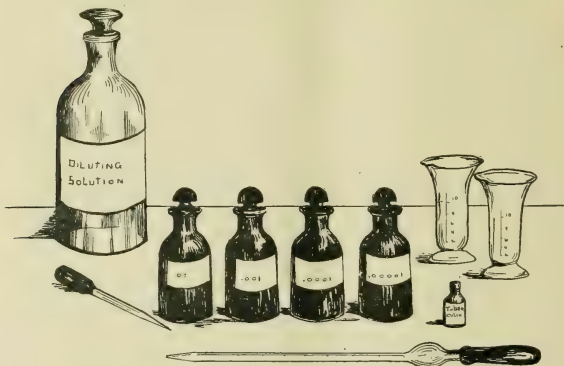
Selection of Cases.—As with all other remedies the best results follow its early application. Tuberculin is not an anti-toxin but a poison that stimulates the resisting elements of the body so that but little is to be expected in cases where the cells are already exhausted and unable to put forth any greater effort. Age and sex are not considered, nor is there any list of diseases that forbid its use. So long as the proper dosage is maintained there is no reason to believe that any harmful results will follow.

*Read before the Onslow County Medical Society, July 10, 1913.

The particular organ or part of the body affected does not alter the method of treatment. With all the various manifestations of tuberculosis the fundamental factor—the tubercle—is the same, and its relation to tuberculin is unchanged.

Tuberculin.—There are many kinds of tuberculin and each originator claims some point of preference for his own product. These various attributes are matters of great conjecture, but one feature is common to them all. While the dose may vary the final result is a tuberculin reaction similar to all the other preparations. For uniformity in practice it is better to follow the general current and use Koch's original tuberculin.

to make 10 c.c.; this gives us a solution containing one part tuberculin to one hundred parts of solution and this we pour into the bottle labeled .01. Now one centimeter from this bottle is placed in the graduate and made to 10 c.c., with diluting fluid, and being ten times as weak as the former is placed in the bottle labeled .001. By adding one centimeter of this last to 9 of the solution a dilution of .0001 is made. One centimeter of this last is added to 9 of fluid reducing the solution to .00001. From these solutions we may obtain any dose that may be required. Their total cost is ten cents. If they become cloudy they should not be used. The stock tuberculin will keep indefinitely, but after it is diluted it



(The outfit that is required by the general practitioner, for the administration of Tuberculin.)

Technique.—The outfit required by the general practitioner is very simple and costs less than two dollars. These necessities are one eight-ounce bottle of normal salt solution containing one-fourth of one per cent. of carbolic acid. This is for diluting the preparation. Two ten cubic centimeter graduates, one medicine dropper. Four brown glass stoppered bottles (the containers for adrenalin are excellent for this purpose). One drachm bottle of tincture of iodine, one cubic centimeter pipette graduated in millimeters and one centimeter bottle of tuberculin. With these can be made dilutions from which any required dose can be obtained. The dilutions are prepared as follows: Draw into the pipette 1-10 c.c. of tuberculin and place in a graduate, then add sufficient diluting solution

deteriorates so that at the end of two weeks they should be thrown away and new ones prepared.

Dosage.—A course of treatment generally lasts about six months; during this time two doses a week are given until 1-10 c.c. undiluted tuberculin can be tolerated, then the interval is lengthened to one week and the dose slowly increased until one c.c. is reached or about six months have elapsed. Patients vary greatly in their tuberculin tolerance, and while one labors over the smallest doses another rapidly goes on to the largest dose. Roughly speaking, those who take tuberculin easily and rapidly are most favorably affected, but those who never reach large doses may still be greatly benefited.

Six months is the arbitrary period; after

which it is thought best to let the system rest from the stimulation. After six to twelve months the course may be repeated. At this time the maximum dose may be reached in a much shorter period.

A Sharpe and Dohme open barreled hypodermic syringe is best adapted to this technique. The required dose is blown from the pipette into the barrel, and with the medicine dropper diluting solution is added to give volume to the dose. The skin is painted with iodine; the injections are made in the arm and the instruments and solutions need not be sterile.

It is a good rule to start with a dose of .000001. To obtain this 1-10 c.c. of the .000001 is used. At each following injection the dose is increased from one to 3-10 c.c., the object being to give the largest dose that will not elicit a reaction at the site of the injection. If this should occur the dose should be reduced or allowed to remain the same until it can be tolerated. After a whole c.c. of this bottle can be taken at a single dose begin with 1-10 c.c. of the next strongest bottle and work up, and so on the dosage goes until the maximum is reached.

At first go slowly until you become familiar with the details and the fractions, remembering that too little never does harm.

After a short experience you can guess very accurately the increase that will not cause a reaction.

The Advantage of the Perineal Over Suprapubic Prostatectomy.

By A. J. Crowell, M.D., Professor of Genito-Urinary Diseases in the North Carolina Medical College, and Genito-Urinary Surgeon to the Charlotte Sanatorium, Charlotte, N. C.

While attending the Clinical Congress of Surgeons of North America, last November, I found the tendency growing on the part of surgeons to do the suprapubic instead of perineal prostatectomy. This manifest tendency suggested the preparation of this paper, not that any new ideas may be offered, or suggestions made to improve upon either of these operations, but to lay stress upon a few cardinal points well known to the medical profession to be very essential in all surgery, as well as to provoke a free and frank discussion of the whole subject.

In the very beginning I will say that every surgeon should do that operation in which he is best skilled, but I will not admit that he is justifiable in continuing to do an operation that is less scientific and offers

less favorable results than that possible, simply because he is better skilled in a different operation. I will admit also that in the large adenomatous, intra-vesicle enlargement with large vesicle stone the suprapubic operation is probably the preferable. No sane person would contend for a moment that fine results are not obtained by the suprapubic operation, but I do claim that better results can be obtained by the perineal route.

In this paper we shall call your attention to the comparative dangers in the two operations, the time necessary for recovery and the complications that may follow each.

In all our surgical operations, we select the one that will give quickest and best results with the least danger to the patient. To do this the observance of certain laws of surgery are essential, one of which is thorough drainage, when such is necessary, and this can best be done from the most dependent point. Drainage is always necessary following prostatectomy.

To say that the permanent results of a perineal operation are equally as good as that obtained by the suprapubic route is not extravagant, judging from my own experience and that obtained by other operators doing the perineal operation. Dr. Young, of Baltimore, who has done more perineal prostatectomies, I suppose, than any man living today has a permanent result record surpassing that of any man doing the suprapubic operation. Only four cases of perineal fistulae still persist in his series of 450 cases, four cases in which it is necessary to use the catheter, where 70% used it more or less before operation, and only three cases of partial incontinence. His mortality in this series is only 3.77%. Eleven deaths occurred in my series of 170 cases or 6.45%, but this represents the mortality of all my prostatectomies, both suprapubic and perineal. Freyer's mortality in 995 suprapubic operations, according to his last report, is 5.52%. I have done a second operation on two of my series for the removal of small lobes, either left at the time or developed after operation. Two cases of incontinence are the only permanent complications I have to report, one of these has complete incontinence and this is the first case I operated upon. The second, which is partial, is one in which I did the perineal operation that Dr. Judd was doing some two years ago. This was the fifth and last Judd operation I have done. Not one of my series uses catheter or has any special trouble in voiding urine or greatly annoyed with frequency. Three of this series have from two to six ounces of residual urine, but each of these had from twenty to thirty-six ounces before operation. It is in this

*Read before the North Carolina Medical Society at Morehead City, June, 1913.

class of cases that no operation will give perfect results, that is, cases with greatly dilated or atonic bladder.

Death during operation is rare and comes from shock. I am not yet convinced that a laparotomy with two holes in the bladder, one cut and the other lacerated, is less traumatism and will produce less shock than an incision into the perinæum with the removal of the prostate under vision without making even one opening into the bladder. We will admit, however, that the suprapubic operation is often easier and can be done in less time than the perineal, and that too by less skilled surgeons. In fact, the suprapubic operation is a very easy one, but anyone skilled in the perineal operation can readily complete it in from twelve to thirty minutes. If the patient is in any condition to undergo an operation at all this is not sufficiently long to cause any great amount of shock and practically never produces death.

Hemorrhage is a complication to which we should give due consideration. In my series I have seen only one death due to hemorrhage and this was in my sixth and last suprapubic prostatectomy I have done. I do not consider hemorrhage necessarily a very frequent complication but one to be kept in mind. Its control is much easier in the perineal than in the suprapubic route and far less liable to occur. Bleeding vessels can easily be seen, caught and ligated. Firm perineal pressure is all that is necessary as a rule for its control. All operators realize the importance of vision in this operation. Some of them have designed special appliances for illuminating the bladder during the suprapubic operation. I think vision quite important, but no special light is necessary in the perineal operation. If we grant, then, that the danger of hemorrhage is equal in the two operations, and I do not, they still stand on a parity.

An opening into the peritoneal cavity in the suprapubic, and into the rectum in the perineal operation, are other complications to be considered. In the hands of the unskilled operator, I suppose, these complications would be about equal, but in the hands of the same operators the opening into the peritoneal cavity would be much more dangerous to life than that into the rectum, and especially if the patient is suffering with cystitis, and this is practically always the case. In either of the operations these accidents will occasionally happen to the most skilled surgeons. In fact, I saw the peritoneal cavity opened accidentally by one of New York's most skilled surgeons while doing a suprapubic prostatectomy at the Clinical Congress. I have gotten into the rectum in two of my series

that failed to close by immediate suture but were closed by subsequent operations. Dr. Young reports two cases in which urethrorectal fistulæ still persist.

If we admit that these complications are equal in the two operations we will have to look further for convincing argument in favor of the perineal route, hence I take up convalescence and its complications.

At that age in life in which we are called upon to deal with this condition, the time of confinement to bed is a very important question to be considered. It is a well known fact that old people whose hearts, secretory and excretory organs are impaired do not stand confinement to bed well, therefore, when we are called upon to do any surgical procedure upon them of whatever nature, the operation that will give swiftest results, everything being equal, should be the one of choice. Hypostatic congestion is a complication invited by the recumbent position, and necessarily this should be as brief as possible.

In the suprapubic operation the bed of the prostate remains a granulating basin in which infected urine is constantly present. This is a source of infection and prevents healthy granulation. Such a condition calls for special drainage apparatus for not only the wound but something like 1500 c.c. of septic urine each twenty-four hours. Such apparatus, if they work ever so well, must necessarily act as an irritant, continuing the shock well nigh too great already for many of these feeble subjects. Those who do the suprapubic operation may be able to get perfect drainage by the various methods recommended for this purpose, but I must admit that I have never been able to get as perfect drainage from any cavity as that obtained from the most dependent point.

711 Realty Bldg.

The Conservation of Vision.*

By John Hill Tucker, M.D., Charlotte, N. C.

Ladies and Gentlemen:—

It was with great pleasure some weeks ago I accepted an invitation from your excellent Secretary to be with you tonight, and present in a few words a paper on "The Conservation of Vision."

To you, my gentle friends and listeners, who have never known what it is to see and yet who have so uncomplainingly and patiently lived your daily lives among your more fortunate fellowmen, improving your own circumstances and adding much in the way of noble effort and example for your

*Read before the North Carolina Association of the Blind, Greensboro, N. C., Sept. 2nd, 1913.

seeing brothers to emulate. I say it seems to me peculiarly appropriate to discuss with you the Conservation of Vision—who could and would be more interested in the conservation of the vision of the individual than you who have known from stern experience what it is to go through the days of life blind?

It is a real wonder, to those of us who have always been in the full possession of our sight, to see what some blind men and women accomplish, and it is in keeping with their many noble efforts in every line of work to find them as an organization leading in North Carolina to consider means to prevent the visual degeneration of the race. Indeed, the great dramatist, Schiller, could not have known many blind people when he spoke through one of his mind's created characters in *Wilhelm Tell*, in these words:

"Never, never More!

O the eye's light, of all the gifts of Heaven,
The dearest, best! From light all beings live—
Each fair created thing—the very plants
Turn with a joyful transport to the light
And he—he must drag on through all his days
In endless darkness! Never more for him
The sunny meads shall glow, the flowrets bloom;
Nor shall he more behold the roseate tints
Of the iced mountain top! To die is nothing.
But to have life, and not have sight,—oh, that
Is misery indeed! Why do you look
So piteously at me? I have two eyes,
Yet to my poor blind father can give neither!
No, not one gleam of that great sea of light,
That with its dazzling splendour floods my gaze."

I have read to you these lines from *Wilhelm Tell*, not alone for their dramatic grandeur, but to enable us to compare from actual lives how different is the life of the blind from that the poet would have us believe it to be. 'Tis an undeniable fact when we lose one of our senses we are given an increased power over the others, which, in part, compensates for the lost sense, and who has not often times noted with amazement how bright and happy are blind men and women, as if that unseen and all powerful Creator in denying you the light of your eyes has filled you with a cheerfulness and a Christian hope which radiates from your lives like rays of sunshine, brightening the lives of all who have the privilege of knowing you, and, after all has been said, does Heaven confer a greater gift to mortals on this earth than the power to be bright and hopeful at all times and under all circumstances. A life thus spent is a life well spent.

Now, let's for a few moments consider some things which will serve to conserve the vision of the race: It has been said that of all the gifts of Nature to man, light is environmentally the greatest, sight is intellectually the most precious. Believing

this statement to be true, our educators and reformers are awake to the importance of taking steps to improve the present unquestionably injured visual power of the Nation, and prevent the further visual degeneration of the individual. Who is not appalled by the fact that so large a percentage of the young, especially in our urban population, find it necessary to wear glasses—for the purpose of either relieving eye strain and the many distressing symptoms of the same, or for the purpose of improving a defective vision?

As a physician, I am frank to admit I sincerely believe at least 50% of the young people who wear glasses would be better off without them. However, the remaining 50% who actually need them, would be a large number, and it is particularly to this class that I shall refer later in my remarks.

Of course, the time to begin to save eyes is at birth, and from the moment we, as physicians, open the eyes of the new-born baby until those eyes are closed in the last long sleep, it is our duty to advise the possessor of so precious and delicate an organ, how to preserve and protect the same. Without going into an anatomical description of this most wonderful organ in the human machinery, upon which great volumes have been written in the past and more will be written in the future, it is interesting to state a few impressive facts about the eye:

Of the 12 cranial nerves (nerves from the brain in distinction from those having their origin in the spinal cord) six of the twelve are distributed in part, and four in their entirety, to the eye. Think, then, of what an irritation to the central nervous system could be an irritation from the eye? The movements of this wonderful organ are notable for their combination of silence, swiftness and precision with an unequaled blood and nerve supply, with a perfect muscular balance. The normal eye stands out conspicuously as the most complete and wondrous organ in this wonderfully made machine of man, and with its aid almost all work is directed. Therefore, it is highly important to look after those things which, left unnoticed and uncorrected, will injure the eye.

1. Comes the question of the care of the eyes of babies. It is a fact—too awful to longer go unremedied by the strong arm of the law—when Dr. Greene reports last June before the meeting of the A. M. A. at Minneapolis that there annually occurs in the United States alone more than 6,000 cases of blindness from the improperly cared for eyes of new-born babies. Just think, each new year adds 6,000 more hopelessly blind to our population—whose eyes

could have been saved by the proper cleansings and care immediately after birth! Every intelligent person must see that all the world is taught that ophthalmia neonatorum (the infection of babies' eyes) can be prevented or cured when taken in time, for Nature is marvelous in the assistance she offers us in this condition. Eyes of tiny infants which look hopelessly infected and inflamed will yield to the proper cleansing and care, and day by day we can watch Nature repair and restore these little eyes, which it neglected would have been lost forever. For the proper care and treatment of such conditions, I refer you to any intelligent physician or text book which deals with these subjects. After baby's eyes are freed from all infection at the time of birth, then the best care is to keep all drops and foreign matter out of baby's eyes, not allowing infants to look at brilliant lights, nor sleep with a light shining in their little faces.

When the child starts to school, the eyes should be separately tested to see that they each have normal vision. During school life, as in all life to follow, three (3) facts should be taught all children;

1. Do not strain the eyes by too long use without the proper rest.
2. Never study, read or work without the proper light, either daylight or artificial light.
3. Never read books, papers or magazines, unless the print is good and the paper of the proper dull finish.

To discuss briefly these three conditions separately:

1. How long should the eyes be used for constant reading and studying? I should say never longer than 30 minutes. One of the best educated and most brilliant men I ever knew, sound and normal in every way, frequently would say that to study thirty minutes, and then stop and reflect over what you have read during that time, you would find out how much more you would get and keep in memory's store-house, than hours of constant poring over books could help you. So let's remember the importance of resting the eyes, as we would any other member of the body which gets tired, for instance, our arms, or legs. Remembering to do this, we would often be spared the necessity of placing disfiguring lenses in front of young, beautiful eyes. The most persistent offenders in this over-use of the eyes as well as the brain are our schools, where young children are often required to use the eyes for long periods without an occasional rest. The way to rest the eyes from near work is either to close them or look at some distant object for a few moments. There is not the slightest doubt

that children's eyes are permanently injured by too long a use of the eyes on near objects, and, within a moment, an injury may be wrought to the eye of a child at school which a long life is too short a time to repair. Next, let's consider the question of light or illumination—which is best for the eyes.

Daylight has always been accepted as the standard of perfect illumination, and this still remains true. Of course, direct sun-light is too bright, and should never be used for near work. Children at school, and grown people at their work, should never work facing a window, or with the source of light in front of them. It should come from the rear, preferably over the shoulders. The walls as a rule should be white in a room that has windows only on one side, but where the source of light is abundant, then some tint or shade easy on the eye, as green, can be selected to tone down the effect of too brilliant an illumination. Dark tints greatly increase the amount of light required for the proper illumination of a room—where school or work rooms are poorly illuminated by windows only on one side, the effect can be greatly improved by the use of prismatic glass in the upper part of the window, such as many stores and other modern buildings are using to improve the illumination where the light is inadequate. Flat sky-lights should not be used, as they give the effect of working under the open sky. All artificial lights, when bright enough and properly placed, are good. We often hear of certain kinds of lights, as electric or oil, being hard on the eyes. This is not true. Of course, a light that flickers or comes in waves is not good, but a steady, white light from all or any source, be it electric, gas, oil or what not, is all right, and will prove entirely satisfactory for the use of the eyes.

It would be presumptuous for me to attempt to go into the matter of the best arrangements of artificial lights, so fully is this subject discussed in literature on the best and proper illumination of buildings, by men who have devoted much time to this work. We all know we should never face the light with our work.

Now, as to the question of the proper print for the eyes. It would seem as all printed matter, such as books, papers, pamphlets, magazines and the like, are intended to be interpreted through the eyes, at least some consideration would be shown that organ, yet the contrary seems the rule, and how often are we called upon to read printed matter where the type is small, paper bad, and spacing indistinct. Our Government is the worst offender in this line. We are all ready to admit that our public serv-

ants often talk much and say little, so to the average mind it would appear best to print less and print what is sent out from Washington in a better and more readable shape.

Another great offender are those who have charge of the printing of our Bibles. How often do we see this great Master book in type scarcely readable. Only a few days ago, a dear old lady was in the office complaining of poor vision. Her case was one of beginning senile cataract, and her supreme test of her remaining vision was the statement; "I can still read my Bible, which is the smallest print I have to read!" Think of it.

Now, our last consideration this evening is one of Nation-wide importance—the question of wearing eye glasses. 'Tis a question more annoying to the average oculist than the tariff is to the average Congressman. Many of you will be surprised at my making such a statement, but consider the large number of magnificent stores throughout the cities of our country, whose sole stock in trade is selling eye-glasses, besides the vast number of immense electrically lighted pair of spectacles across the sidewalks, proclaiming to the unwary "Here is the place to get the eyes fitted with glasses." Our papers and magazines advertisements are filled with announcements of eye drops and creams, which claim to cure every ill the flesh is heir to. Traveling vendors of eye-glasses herald their approach in the weekly papers in such terms:

"DR. SHOEMAKER will be at Mudville on Saturday, August 30th. Now is the time to have the eyes scientifically tested. I guarantee to relieve all headaches, nervousness, indigestion, colic, constipation, rheumatism, and the thousand and one pains directly attributed to eye-strain. Have it done by the latest methods. We use the Ophthalmometer in all our examinations. Examinations free."

It was, I think, Dr. Murphy, of Chicago, who so truthfully said "Medical and surgical advice is worth just what it costs you." To go back to the question of eye-glasses. If there was not something the matter with the eyes of a great many people, there would not be all of the stores, advertisements, traveling oculists and the like referred to above. There are always a number of people ready to take advantage of human sufferers to sell them the panacea for their ills, whether it be found in a nauseating dose or a pair of Shur-on Eye Glasses. The only question of vital interest to the seller is the profit in the sale.

The causes of eye strains are many, and the symptoms oftentimes obscure and dis-

treassing. Poor illumination and over-use are two of the great causes of weak eyes. An improved illumination where we work, and an occasional rest, by gently closing the lids over tired, aching eyes, with now and then a warm, salt water bath, will do away with many a complaint of sore eyes, for which poor working girls and boys part with their hard earned money to some vender of glasses. Do not misunderstand me. I know full well there are many capable and conscientious optometrists and oculists all over the land who are doing great good and relieving much suffering by carefully and properly prescribing glasses to people who have a real refractive error, such as myopia or astigmatism and to whom life would be almost unbearable without the necessary aid given by the correcting lenses to their abnormal eyes. The very fact that there are cases in young people where the eye is at fault and responsible for many severe and painful symptoms, which are like magic relieved by the proper glasses, which has led many to experiment upon this vital and sensitive organ, referring for endorsements to certain eye cases which were wonderfully relieved by glasses. To cite an interesting case:

I know of a young man who was ill for two years, and during that time he was treated by most excellent physicians. In fact, I shall take the liberty to read a letter in his own words, telling of his interesting case:

"Dear Doctor:—

I thank you for yours of the 11th, and was very glad to hear from you.

As to my troubles I don't know where to begin and where to end, but will give you the best information I can recall.

In about 1904 I had a very severely inflamed eyeball, and called on Dr. A., who treated me by some eye wash, which did not seem to give much relief. Later I called on Dr. B., who I think gave me the Cup treatment and in that way cured the initis, and gave me glasses.

Several months after the above I commenced to have the pains at the base of the brain where same comes in contact with the cords of the spine. I asked Dr. C. about this and told him all about my former troubles, but he did not think the pains were in the right part of the head to be caused by the eyes, so as nothing he did for me seemed to give me any relief, and I gradually found the pains becoming more severe, in fact I could get no relief in an upright position at all and when traveling I would be compelled to turn two seats together and lie down, also when walking I leaned over in a stooping position. I also noticed that this trouble was affecting my

stomach in so far that when I had severe pains in the head I would vomit. I then went to Dr. D. who, after having my blood analyzed and making a thorough examination of me, decided that the pains might be from malaria, so he gave me injections of quinine by hypodermic and also in capsules day and night. This did not have the desired result, so after keeping me in his hospital awhile, he advised me that he did not know what was the matter and that I would do as well home as I was doing there, so I returned home. I gradually grew worse and soon came to the point where I imagined I would soon be paralyzed down my spine as the pains seemed to be gradually extending. In this condition I went to New York and entered St. Vincent Hospital, where different specialists gave me thorough examinations, and I had a good blood, nerve and stomach specialist all to examine me. They each decided there was no organic trouble, so as the last resort I went to see Dr. E., an oculist, who, after making a thorough examination, pointed out to me that the entire trouble was caused from my eyes. As he explained to me, one of my eyes was weaker than the other and the stronger eye caused the weaker one to strain and draw at the base of the brain. How I received relief when stooping over, he said was on account of the range of vision being shortened only to the distance from the eye to the ground, thereby relieving the strain from the weak eye. I am sorry to say that I do not happen to have a copy of the prescription, but I secured a pair of glasses, and in less time than a week I could eat almost anything and was going to the theatre. I returned home immediately, went back to work, and had no further trouble.

I have no pains in the head, my eyes do not bother me, and my stomach is in first class condition.

Yours truly,"

Dr. Lewis Callan, of New York, was the oculist who gave this patient the proper glasses and relieved him so completely of his distressing symptoms, which were fast rendering him unfit for his life's work. In talking with Dr. Callan about this case, as it came under my observation in the beginning of my eye work, he said that it was with the use of mydriatic (drops which render the eye temporarily in a state of perfect rest). He found this patient to have a far sighted astigmatism, and the glasses he was wearing were for a near-sighted astigmatism. In other words, he was wearing minus or concave lenses, and he should have been wearing plus or convex lenses. Now, the minus lenses gave him better vision, but absolutely increased his pain,

and rendered him an invalid. Think of it!

Now, my friends, I have given you the details of this case, believing facts from actual practice speak louder than volumes treating of the theory of refraction, and this case covers, to my mind, the question under discussion. I do not question the honesty or sincerity of the first eye men this patient consulted, but you can see the embarrassment caused the doctors he afterwards consulted when they had been assured the eyes were not the trouble, for his glasses were all right and he could see splendidly with them. This proves the absolute necessity in young irritable eyes of using the proper drops and method in the examination of such eyes. The very fact that it is with great difficulty that we often differentiate and properly correct certain small errors of refraction which, left uncorrected, give the greatest trouble, is the reason that every precaution should be taken in seeing that the examination is conducted by capable men along the most improved lines. Small refractive errors often give more trouble than large ones, for the small errors can be overcome by the muscles of accommodation, and the larger errors cannot. Therefore, it is this constant effort required to overcome the small error which produces eye strain and pain, although the vision is perfect. Please do not confuse good vision and eye strain. An eye that has perfect vision, reading small type at a great distance, may be the cause of many distressing symptoms. I know that drops in eyes have often been carelessly used by men poorly prepared to do refraction, and, in certain instances, have aroused a just suspicion and fear of having drops put into eyes. However, it is a positive fact that the proper drops used in the refraction of young people's eyes is absolutely necessary to refract them, and there is not the slightest danger from their use, in fact, the drops that are used are recommended to be used immediately upon the injury of an eye, and many an eye that is blind today could have been saved had drops been used early in the injury, so I do not feel that the question of possible injury of the eyes by the use of drops is worthy of our discussion, and only with these drops can any case under 40 years of age be scientifically and accurately refracted. Often oculists do not have the courage of their convictions, and allow patients to select own glasses, even if drops have been used, and the shadow test positively recording the proper glass to be given.

To sum up the whole question of refraction: It should be done according to the rules of a science unquestionably perfected, and not as it is often done by a test of vision. Frequently, as in the case I have reported,

the glass that gives the best vision without drops is a glass that gives good vision on account of the abnormal irritation of the muscles of accommodation, and in this state of irritation of these muscles the patient reads best. Men of true scientific worth have devoted their lives in perfecting the science of refraction, and when glasses are worn it is a very safe and sane rule to get them in a scientific way.

I cannot close these rambling remarks about the eye without a full and complete acknowledgement of the debt all the world owes to blind men and women. Their lives are often records of patient endeavor and great accomplishments in the face of disheartening barriers. What example of nobler work and more marvelous accomplishments does the entire annals of human history give us than the life and work of Helen Keller? Yes, from the days of Blind Homer to the present hour, many of the world's greatest benefactors have been blind. There still rings in our ears, if only we stop to listen, the beautiful prayers of our saintly Milburn—the blind Chaplain whose petitions ascended from the Halls of Congress Assembled to the Throne of our Father in Heaven.

Believing the eyes to be all that they are—the very windows of the soul—still the human soul, when the curtains are drawn, goes on developing in its natural purity undefiled by the scenes of this world, and it was a Blind Milton who told us best of the scenes of a better world, where there will be no blindness, sorrows or pains.

Good Night!

812 Realty Bldg.

Some Observations on European Clinics.

By Dr. D. T. Quigley, North Platte, Neb.

For one who is contemplating putting in the summer months visiting the surgical clinics of Europe it is a good plan to begin with Italy and work north with the spring.

In this way the south of Europe can be seen at its best and one can spend the hottest weeks in England where it is never hot enough to be uncomfortable.

This is the plan I adopted and my first city was Naples.

Here in the International Hospital there is no operating room. The operations are done in the patient's own room.

In Rome there is a clinic well worth visiting with a great amount of material. This is in the Policlinico, and the chief surgeon is Professor Bastianella, who is famous all over the world as being the man who first introduced iodine as a general antiseptic. Bastianella is a man of middle age with a great amount of respect for Americans. He

speaks excellent English and the brilliant technique in his clinic is unsurpassed by any clinic in Europe. He is a good teacher and a good fellow. No American surgeon visiting Europe should miss seeing him work. A feature of Bastianella's clinic is that he uses silk and interrupted sutures for all his work. He uses a great deal of local anesthesia and spinal anesthesia. For these he uses a one per cent. solution of novocaine.

In Vienna I encountered a wave—or perhaps I should call it a flood—of gastroenterostomies. One gets tired of seeing this operation in Vienna. The technique is the same as in Rome—silk and interrupted stitches—but in Vienna no rubber is used on the blades of the clamps to protect the gut and the stomach. Hochenegg does the operation without any clamp at all, simply using a needle and thread. His clinic and the Eiselberg clinic are the leading clinics in general surgery with the Wertheim and Schauta clinics occupying the same position as regards diseases of women and obstetric surgery.

Zugercaunell is the leading man in genitourinary surgery and his work in this line is the best I have seen in Europe.

In the other clinics mentioned the assistants do practically all the work, so the technique is not much.

Zugercaunell does all his own work, or nearly all of it, so his clinic is well worth the time spent visiting it.

The feature of the Vienna clinics is the excellence of the diagnosis. One very rarely sees an operation where the diagnosis has been proven false. The surgeon visiting Vienna will make the best use of his time if he puts it in studying diagnosis.

The same thing is true in the medical department, and Professor Richard Bauer has some startlingly new and useful points in diagnosis that are of untold value to any medical man.

The large amount of surgical work done in Vienna by local anesthesia is surprising to the average American.

In Hochenegg's clinic all the stomach work—gastroenterostomies, resections for cancer, etc.—are done under local anesthesia (not spinal). Goiters are nearly always operated on under local anesthesia.

Novocaine one per cent. to one in five hundred is the anesthetic used. Stovaine has been discarded. When a general anesthetic is used preference is given to ether. In the Lorenz clinic a mixture of ether, alcohol and benzene is used.

There are four good things which have originated in America that do not seem to be accepted in Vienna. They are: Murphy's bone work, Beck's bismuth paste,

Abbott's treatment of spinal disease and Fischer's treatment of nephritis. They seem to entertain some prejudice against American ideas.

There were a large number of Americans studying in Vienna. One of the most prominent in surgery was Dr. Bitting, of Durham, North Carolina. The classes continue without interruption up to the first of August. During the month of August the teachers go out of town on their vacations.

In Berlin the material is plentiful and the work is good. The leading men seem to do their own work instead of turning it over to assistants. Here, as in other places on the continent, catgut is hardly ever used.

I arrived in London in time for the International Congress. There were 7,500 members present from all parts of the world. America was very well represented. Special clinics were held in all the large hospitals but Mr. Lane's clinic seemed to be the principal attraction. His clinic room during the Congress probably held the greatest aggregation of eminent surgeons ever gotten together under one roof. Lane does his bone plating operation entirely with instruments, never putting a finger into the wound. Although he uses gloves he is afraid of finger infection.

His operation for the removal of the colon is highly interesting and the results seem to be good. He had 25 or 30 patients assembled for the benefit of the members of the Congress, who had had their colons removed, some of them months and some of them years before, and they all looked quite happy and well. He does not do the short circuiting operation any more, as he states that these patients do much better if the whole colon is removed. He does the operation for obstinate constipation, and all conditions of toxemia resulting from absorption of poison from the bowels, for Graves' disease, for tuberculosis, and some other things.

He uses a neutral paraffin oil when his patients require a physic, and he takes three ounces of it himself every day. He uses a Russian oil, as he considers the American product unfit for medicinal use.

Lane also does a very beautiful cleft-palate operation and has recently published a book on this subject.

Among the younger men in London who are doing most excellent work are Mr. Back at St. George's Hospital and Mr. Carling at the Westminster Hospital.

There is a great deal of good work to be seen in London, the only objection being that the hospitals are so far apart and the transportation so slow.

The surgeons of London are very courte-

ous and go to great trouble to entertain visiting doctors.

Cork, Ireland, Sept. 7, 1913.

Belladonna Poisoning.

By Dr. John W. MacConnell, Davidson, N. C.

The following case of belladonna poisoning was of interest to me on account of the unusual method of contracting the trouble, though in the course of the case there is nothing of more than ordinary interest.

Mr. F., station agent in a neighboring town, consulted me on Sept. 10th for sudden loss of near vision. When he went to his office for his morning work, he found he could not read his orders or transact his business. The night previous he had suffered from nausea and vomiting, had been restless and at times delirious, and when he found he was "blind" he naturally became much alarmed, consulted his family physician, who prescribed some eye wash and referred him to me.

When I saw him his pupils were not greatly dilated, but the dry mouth and skin and the flushed face pointed at once to atropine poisoning. It was only after long and tedious questioning that I could find where the trouble had originated, but when I asked whether he had used any pile ointment, he answered in the affirmative, and upon investigation I found that he had used a patent pile ointment, which he introduced with a pile pipe, and this was the source of the trouble. On the night when he first used it he had symptoms of the poisoning, of course unrecognized, however, and as he was not relieved of the pain he continued to inject the ointment, with the result that he was badly poisoned. The case yielded to treatment readily. Small doses of opium and saline laxatives were given and the patient is now, after ten days, able to return to work.

In accordance with the Pure Food and Drugs Act, the ointment was stated to contain atropine, but there was nothing on the label to tell of the possible dangerous effects of absorption of the same.

A few months ago I was consulted by a mill superintendent who came to me in alarm when he found he was unable to read his morning paper when he came down to breakfast. He thought at once of retinal hemorrhage, as he had known of such cases, but upon inquiry I found he had been using a belladonna liniment on a sprained ankle the night before and his pupils were dilated. In his case, however, there was no systemic disturbance as in the first case, the mydriasis being the only symptom.

So many patients exhibit such a marked intolerance to atropine that it should al-

ways be used with caution. This is quite frequently a family characteristic, and I have among my patients a family each of whom exhibit such a marked intolerance to the drug that even a few drops of a one per cent. solution of atropine in the eye will produce a marked erythema, dry skin, retention of urine, and at times dizziness and hallucinations.

Acidemia and Its Treatment.

The old way of adding to our *materia medica* was to take a new plant, taste, smell, and otherwise try it, and then proceed to ascertain in what diseases it could be given with benefit. Many of our best remedies were discovered by accident; many others came to the doctor from his patients.

Nowadays the need is first felt, the pathologic condition defined, and we turn to our arsenal to select a weapon to meet the need, or seek to devise a new one. We have learned to look beneath the surface and ask the innate cause for the symptoms displayed,

Every doctor knows that there occurs an infinite multitude of little ailments, indeterminate, impossible to classify and difficult to name, yet which occasion in the aggregate an immense amount of suffering. There are many men who are not sick, yet they are not well. The joy of living is unknown to them, yet they are ashamed to give utterance to complaints for which they can advance no reasonable excuse. Now and then the community is shocked to hear of the suicide of some citizen who has no known trouble that could account for the awful deed.

These ailments, multitudinous in their variety of symptoms, have been traced to their true cause—and how could we have been so blind. They are due to the presence of fecal or other contaminations in the blood. Circulating to every part of the body, the blood supplied to every cell and fiber for its nutrition carries these toxins with it. Whatever cell or fiber proves the more vulnerable, there will the general toxin display its effects in local disease. Nerves, digestion, skin, or special sense organ responds with a disorder locally manifested but induced by a general cause. The specialists are awaking to this, and we hear of them looking to such toxemias while employing local measures.

Two forms of toxemia present; In one we find in the urine indican and skatol. These are generated in fecal matter, retained beyond the normal time, reabsorbed into the blood and excreted by the urine. The other form is due to the presence of acid, an acidemia. This also is detected by the

urine examination. The means of readily applying the tests for these have been simplified by Dr. Harrower, so that the busiest doctor can in a few moments satisfy himself if he is dealing with one of these conditions.

The remedy is not so simple. Any cathartic may empty the bowels, but keeping them empty is another matter. The method I have found best is this: Limit the diet to the needs, in quantity, and cut the azotized proportion ruthlessly. Give a few doses of vegetable cathartic every day until the indican-meter no longer shows the presence of indican. Then let the patient take a small teaspoonful of Abbott's Saline Laxative, in hot water, every morning on rising. To complete the cure we have a remedy so well devised as to merit special consideration, in Abbott's Sodoxylin. This contains in each dram forty grains bicarbonate of soda, ten grains sulphate of soda, five grains sulphocarbolate of sodium, 1-250 grain colchicine, 13 grain juglandoid and 1-3 grain xanthoxyloid. This gives us an antacid, antiseptic, laxative, cholagogue, incitor of indigestive secretions, and a very useful tonic to the whole digestive system.

Here's how it works: A young Jew applied to me for relief from the pangs of brachial neuritis. He had endured several years, the pangs reappearing on the least exertion, so that he could not work. Treatment had completely failed. Reasoning that the nerves were irritated continually by something the blood brought them, I tested his urine, finding indican, skatol, bile, and eighty-nine degrees of acid. I cleared his bowels with podophyllin followed by Saline Laxative, gave a can of Saline to be taken mornings, and put him on Sodoxylin. In a week he reported progress; in another he was getting well; in one month he was completely free from his terribly painful complaint, and was working in a shoe store. You could not pry that boy loose from his Sodoxylin with a crowbar.

The usual symptoms are dullness, apathy, a nervousness characterized by "what's the use?" Sluggishness and inability to keep to the work or the mind on anything, face pimply, blotchy, eyes dull and whites muddy, bad breath, catarrh, no appetite, constipated, urine burning or muddy, sometimes water-brash, at others sharp stomach pains, and very many other minor symptoms. One of the notable alterations after a week of Sodoxylin is that if you call in the evening you'll find the patient singing, or the family laughing at his wit. A load has moved off his spirits.

I'm not saying other things do not cure this, but Sodoxylin was devised especially to meet this condition and it meets it,

squarely as a blow on the point of the jaw.—R. L. Means, M.D., Pittsburg, Pa., in the *Journal of Therapeutics and Dietetics*.

Treatment of Epilepsy.

Five years' experience in the treatment of epilepsy by the salt deprivation method is detailed by Ulrich (Munch. med. Woch.) the director of the institution for epileptics at Zurich. Few physicians, he states, have pursued this form of treatment for more than a few months at a time, and therefore he records the results attained by the administration of bromide in the absence of salt from the diet over a period of five years. The cases are given in full detail, but the features of one may be taken as typical of all. The epileptic attacks had in this case lasted for 30 years, during which the total number of seizures had been about four thousand. During at least sixteen years bromide treatment had been carried out to the extent of one and a half to two drachms of this drug daily. There had been no improvement—indeed the number of attacks was rising, and in 1907, when the patient was on bromide only, there were 207 attacks; while after the salt-free diet was combined with bromide administration the attacks fell to 37 in 1908, 51 in 1909, and none at all in 1910. In another patient aged 31 there had been 3300 attacks in 12 years of bromide treatment. Starting a salt-free diet in 1907 she had only 152 seizures as against 226 in the previous year. Next year they fell to 39, and then for two years she had complete freedom. In several other cases there was either a complete stoppage of the fits or a reduction of their number by about 5 per cent. when the salt-free diet was instituted. Maier (ibid) describes the results obtained both with these cases and with others in a psychiatric clinic by using a soup made from "Sedobrom" tablets. These contain each about 16 grains of bromide of soda, a very little salt, and sufficient extractive and fat to taste like a strong meat soup, when dissolved in 100 c.c. of water. Two of these tablets were given night and morning and were well borne. The rest of the food was made as poor in salt as possible.—*Edinburgh Med. Journal*.

The Inventor of Dover's Powder.

Dixon details a number of interesting facts concerning Thomas Dover, the English physician and navigator, who was born in 1660 and who died in 1742. He was known in his day as the "Quicksilver Doctor," having created quite a stir by advocating the use of crude mercury in the treatment of many diseases. In 1708 he sailed on his famous voyage around the world. The expedition, which consisted of six

armed ships, was noted for three achievements: the taking of the town of Guayaquil, the capture of the lesser *Manila* treasure ship, and the relief of Alexander Selkirk ("Robinson Crusoe") from his voluntary exile on the island of Juan Fernandez. It is suggested that it was Dr. Dover who introduced Selkirk to Daniel Defoe and persuaded the former to entrust his diary to the famous author of "Robinson Crusoe." Selkirk conceived a grievance against Defoe for stealing his story and swelling it into the great romance. Previous to his voyage around the world Dover had settled in Bristol and had achieved honorable distinction as the first medical man who gratuitously offered his services on behalf of the poor, under the care of the guardians of that city. This was in 1696, during an epidemic of spotted fever, of which he wrote later, "About Fifty Years since, the Fever raged so much in Bristol, so that I visited from Twenty-five to thirty Patients a Day for a considerable time, besides their Poor Children taken into their Workhouse, where I engaged myself, for the Encouragement of so good and charitable an undertaking, to find them Physick, and give them Advice at my own Expense and Trouble, for the two first years. All these Poor Children in general had this Fever, yet no more than one died out of the whole Number, which was near two hundred." The hospital where Dover worked is a well known landmark in Bristol, called St. Peter's Hospital, and now used as the offices of the guardians.—*Proceedings of the Royal Society of Medicine*.

Chronic Arthritis.—Jones (British Medical Journal) says the general tendency to consider chronic arthritis as of a cryptogenetic infectious origin finds support in the therapeutic experience of the writer. Twenty consecutive cases are reported which clinically suggested a streptococcal origin, although the bacteriological examination was negative. The cases were, in the majority of instances, of long standing; they had resisted general therapeutic measures; and no source of infection was clearly indicated. Effusion into joints was rare, and the fluid when removed by puncture was invariably sterile. Blood cultures were also sterile whenever investigated. For various reasons streptococcal infections were suspected, and the patients were accordingly treated with vaccines made from streptococci obtained either from the mouth, in cases of oral sepsis, from the urine, or from the feces. Eight out of 20 unselected cases gave strong therapeutic evidence that their arthritis was due to infection by streptococci chiefly derived from some part of the alimentary tract.

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DIFFERENTIAL DIAGNOSIS.

In cholelithiasis or choletitis, we have as a rule, a history of a severe attack of pain, the crisis being of a sharp cutting agonizing character, followed by tenderness over the right hypochondriac region, but not complicated with vomiting nor with rise of temperature, although the pulse may be weak and the patient may go into a state of collapse.

After the remission of the acute crisis we have often the so-called dyspeptic derangements which are wholly of a reflex character.

In pyloro-spasm we have retention of ingested food, fermentation of same and general discomfort; but on examination we seldom find any tenderness aside from the discomfort caused by the general distention, unless the spasm of the sphincter should be due to an ulcer in its grasp, if a gastritis should supervene because of the retained fermenting food, lavage will relieve this discomfort where it is not caused by a pathologic condition either in the viscus itself, or in its inlet or outlet.

In a great majority of cases of pyloro-spasm continued milk diet will effect a cure, as will also a milk diet in a large number of cases of ulcers in other parts of the digestive tract.

Cardio-spasm is relieved by hot drinks or the introduction of the stomach tube. If the contraction occurs after surgical operation sudden death may result. Discomfort and pain due to other causes such as entropsis, gastroptosis, leaky ilio-cecal valve, adhesive bands, etc., are generally followed by obstinate constipation, gas accumulation in the lower intestines accompanied by tenderness of the whole abdomen.

Pain due to acute pancreatitis is of a sharp non-intermittent character and in chronic cases there is a sense of fullness over the whole region of the epigastrium. In acute cases we have sudden and persistent vomiting, high pulse, and if the infection is a mixed one from the neighboring organs, there may be a slight elevation of temperature, while in the hemorrhagic cases there is a lowering of the temperature.

According to Fitz and Opie we may have suppurating pancreatitis with only a slight elevation of temperature.

In chronic cases where there is a disturbance of the function of the islands of Langerhans we have an interference with the function of its internal secretions in changing sugar into an absorbable form. According to Bapine and Bernhard it secretes a glycolytic ferment which is capable of transforming sugar. Hanseman and Meknikowski mainly agree to this deduction. In cases of diabetes mellitus hyaline degeneration has then progressed to a partial destruction of the pancreas and the impairment of its functions. In duodenal ulcers the pain is of a pressing, gnawing character—a number of hours after meals. Umbilical hernia is quite common and is generally overlooked by the surgeon as well as the general practitioner. This lesion may cause distressing symptoms which closely simulate disease of any of the abdominal organs.

Any patient of middle age giving a history of long standing pain over the so-called pit of the stomach; digestive distress of various kinds, accompanied by impaired general health, with marked tenderness over any part of the epigastric region is not suffering from dyspepsia but from a distinct pathological lesion, and we are in duty bound to formulate a diagnosis by subjective and objective symptoms, as a disease of the stomach, except by exclusion. In a majority of cases the lesion is primarily in some neighboring organ and not in the viscus.

We are dealing with a condition which may mean the untimely death of our patient and we are in duty bound not to make an arm chair diagnosis of dyspepsia but a correct one founded on scientific deductions.

EPIGASTRIC PAINS.

Of all organs of the animal or human body the stomach is one of the least liable to disease, and no organ is as often treated for supposed derangements or diseases of which the organ is free. Symptoms are mistaken for disease, the disease being in the neighboring organs or in the inlet or outlet of the ventriculus. Diseases of the gall bladder and its duct, of the liver and its ducts, and of the pancreas and its ducts, diseases of the pyloric and cardiac ends, as well as mechanical defects of some or all of the said neighboring organs, resulting in mechanical displacement and disturbances of the stomach causing pain and discomfort which are only forms of nerve impulse transmitted to the consciousness of the individual that there is a lesion somewhere in the abdominal cavity.

Of all the blessings vouchsafed human as well as animal creation, the sense of pain is the greatest. Without this sense there would be no premonition of danger, no

caution to whisper to man or to warn him from any destructive agency, and without this sense of danger life could not long exist.

The organs of the upper part of the abdomen are, under normal conditions, free from pain and sensation. In this part of the peritoneum sensation is far below tactile sense of the skin, but in the state of inflammation, when the nerve fibres become surrounded by the inflammatory exudate and the lamina and the fibres of Schannu become compressed from combined muscular contraction while compressed in the exudated fibrous material and said material probably contains exudated harmones or enzymes, if in or near the intestinal tract, which in all probability causes additional irritation to a nerve filament, then we have all possible conditions for an excruciating pain: or, if the pathologic process is a semi-chronic one we have all the facts which lead to the disturbances of the upper part of the digestive tract.

Diseases of an acute character in the epigastric region, such as infection from perforating ulcers of the stomach, as well as other diseases affecting this organ, will not be dwelt on in this paper. We shall deal only with non malignant diseases of the neighboring organs of the viscus.

If we examine a patient whose history points to a diseased condition in the region of the epigastrium, we will on examination almost invariably find a rigidity of the recti muscles and often a marked hypertrophy, especially of the upper segments. This is nature's way of protecting the underlying sensitive organs. Pains over the so called pit of the stomach are, in a large proportion of cases, not due to diseases of this organ but to disturbances of neighboring organs. When we find pain on pressure and often marked pain if the force of the pressure is transmitted to the deeper part of the abdomen by slight percussion stroke, there is some lesion in the underlying organs. Pain under the insertion of the seventh and eighth ribs is supposed to indicate a diseased condition of the gall bladder, but not necessarily so, for often in cases where cholecystitis has persisted for a long time, the ducts are shrunken as well as the viscus, and are drawn downward and inverted towards the center of the body, and may often be found near the pyloric end of the stomach. Palpitation is therefore not an infallible mode of examination.

Of all diseases the stomach is blamed for, inflammation of the gall bladder and its ducts is the most common. However, if the examiner persists in following the subjective symptoms he will invariably elicit the fact that at some time the patient has

had an attack of acute pains, often mistaken for contractions, usually called colic of the stomach, as the first crisis of the gall bladder trouble. Such an attack generally follows the ingestion of foods which may, by their character or mode of preparation, cause the so-called acute attacks of indigestion. The crisis often comes at night time. At first the pain is generalized over the upper part of the abdomen, but generally in a few moments will be localized in the upper part of the epigastric region. The pains are sharp, cutting and agonizing, and of such intensity that the patient sometimes enters into a state of shock. A number of deaths are on record following gall bladder contractions, due to the intense pain.

Stomach lavage often relieves the symptoms of the first attack, but if one or more follow the first in rapid succession the attacks may be diagnosed as hour-glass contraction of the stomach or angina pectoris.

The first attack is often the most severe and is followed by others milder in character: or, in a large number of cases, only one severe attack has been noted. But gastric disturbances have been the rule in such cases and are in a large number of cases treated for indigestion. The digestive disturbances are merely sympathetic in character. The hepatic plexus transmits the trauma to the gastric plexus either directly or through the semi lunar and solar plexus, and from this center to the phrenic and splenic systems, causing a sensation of pain under the right shoulder blade.

SYMPTOMS OF CHOLELITHIASIS ARE VARIED.

There may be one or more attacks of pain and a sense of soreness in the right epigastric region, rigidity of the muscles, pain on pressure, etc., but the chief symptom is the gastric disturbance. Jaundice is present in only about 8% of the cases cholelithiasis or cholecystitis. A palpable gall bladder is found only in a small proportion of cases. We are not able to offer statistics as to the proportion of so called dyspepsia, etc., due to affections of the hepatic ducts, but it is at least as high as 30 per cent.

Of the different disturbances due to neurotic origin we will not discuss in this paper. Pyloric obstructions, either congenital—which is quite common or due to an ulcer or a fissure in its grasp,—or according to Thompson and Graham, fibromatosis, or a healed abrasion, or to sympathetic contractions caused by diseased neighboring organs, neurotic phenomena, injudicious eating and drinking by the individual, often is the cause of gastric disturbance and the retention of food. Fermentation with all its

chain of symptoms is nearly always diagnosed as a pathologic lesion of the stomach.

Pyloro-spasm is the cause of a large number of cases of dilatation of the stomach, and of ulcers of the organ. I may state it is one of the chief factors in the causation of ulcers. And pyloro-spasm has often led the surgeon to believe that he had to deal with a pathologic lesion instead of a muscular contraction of the outlet of the stomach.

We may examine stomach contents and form deductions often at variance with facts. In one of the largest clinics in this country correct diagnosis has been formulated in twenty-four per cent. of cases, after examining the usual test meals.

Pyloro-spasm, due to irritating and fermenting food in the stomach, is often cured by one or more washings and a milk diet for an indefinite length of time. We have in many cases explored the abdominal cavity expecting to find pathological changes; but on finding no lesion and by invaginating the duodenum, and introducing the finger into the pylorus, a distinct stricture has often been observed. Without resorting to a Finney operation or other form of pyloroplasty, complete recovery from all gastric trouble has been the rule. Surgeons should always examine the pylorus to ascertain if this aperture is normally patent.

Then we have cardio spasm which in a large number of cases is of a neurotic character. In swallowing our food a large quantity of air is usually taken in and it is the function of the cardiac sphincter to allow the air to be regurgitated at meals without the individual being at all conscious of the fact. We have often found that the cardiac end grasps a quantity of air in its grip and the pain is often severe with a feeling of suffocation. A glassful of hot water will generally relieve this distressing symptom.

Acute dilatation of the stomach, especially after operative procedure, is due to a spastic contraction of this sphincter muscle.

Insertion of a stomach tube will relieve this dangerous condition.

Then we have duodenal ulcers with pain and distress in the so called pit of the stomach, and often mistaken for a diseased condition of this organ. Duodenal ulcers can be diagnosed from gastric ulcers by their tendency to exabration of the symptoms from four to six hours after meals, and the pains relieved by alkali salt, which tends to neutralize the acid secretion flowing over the raw surfaces. An alkali seems to act as an anesthetic or an analgesic on all ulcers. In this affection we also have eruption of gas, hyperacidity, fermentation of

ingested material, etc. We may even find Boas Oppler bacilli, if the trouble is combined with retention due to pylorus spasm.

Then we have entropsis of the colon, which drags the stomach from its normal position, thereby kinking the pylorus. Then we have obstruction due to adhesive bands, Jackson's Veil of which Lane's Kink is only a form, and shortening of the pylorus due to a contraction of the ligament in Fossa of Tritz.

A loosening or stretching of the colon from its attachment in the impressio colica whereby the colon and the cecum are lengthened, thus interfering with its peristaltic or lifting motions, and of Cannon's Waves, or anti-peristaltic waves; incompetency of the ileo-cecal valve whereby food, instead of being compressed in the colon and its moisture absorbed, is regurgitated into the ileum jejunum.

Absorption of toxins and hormones, causing intestinal stasis, is in a large majority of cases charged to the stomach's account.

Then we have amebic infection in the large intestine which may simulate diseases of the stomach. All these disturbances are referred to the epigastric regions, hysteria and psychic causes are often sources of disturbance of the stomach, as well as faulty saturation of the liquids in the intestinal tract, the ionization of its salts, etc.

However, of all organs subject to disease in the neighborhood of the stomach, the pancreas is the most often overlooked. This organ is one of the best protected in the animal system and its source of infection is either indirectly due to infection carried in the homolytic system, or generally from a direct extension of inflammations of the biliary system. Deaver claims that 50% cholecystitis pancreatitis is present. In 8 per cent. the duct of Wirsung empties directly into the duodenum instead of uniting with the common duct; the latter discharging both bile and pancreatic secretions through the ampula of Vater. Ductus Santorani enters the duodenum in 25 per cent. separately from the duct of Wirsung. This organ, indispensable in the animal economy, is little studied by the average practitioner and the poor stomach has to shoulder the blame for any pathological lesion effecting the function of this neighbor.

Pancreatitis, acute as well as chronic, is quite common and is often mistaken for other diseases. It may cause death in from one to two days, as the organ may suppurate and if not properly drained death will invariably ensue. Inflammation generally extends to this organ from an infected gall bladder. In a majority of acute cases drain-

ing the gall bladder will effect a cure.

The islands of Langerhans being the internal secreting part of the organ, is the part recognized as having a direct action on the absorption of glocoffen in the human system.

Symptoms of pancreatitis are at times misleading. In our work we have only found one symptom which is invariably present, and that is an unusually thick fur on the tongue, which is often of a pearly whiteness. Some of our patients when talking have given an impression of having the mouth filled with cotton. Cammagne's test is a laboratory test and not available to the average practitioner. In suppurating cases we may have a slight temperature with high pulse, while in hemorrhagic cases the temperature is often below normal, pain is intense without remission, paralysis of the bowels is general, and many a case has been operated on for ilious or obstruction of the bowels when the main trouble has been pancreatitis. If relief is not affected by operative measures we have vomiting, regurgitation, sympanitis and all evidence of peritonitis with obstruction.

The pancreas is easily reached through a tear through the gastro ciliac omentum or by lifting up the greater omentum and slitting the mesocolon. In this way we can reach the organ with little difficulty. In ulceration of the posterior wall of the stomach, infection of the lesser omental space is generally followed by closure of the foranum of Winslow, the infected material thereby being confined to the posterior fossa and invariably infecting the pancreas.

Editorial News Items.

By order of the Board of Directors the State Sanitarium for Tuberculosis at Montrose was closed Sept. 15. Dr. M. Eugene Street, superintendent, has tendered his resignation which has been accepted by the Board. Additional improvements are in process of making and the directors hope to fill the vacant superintendency and reopen the Sanitarium by the middle of October.

The students of the preparatory (2 years' course) Medical School of the State University at Chapel Hill have organized its 53 members into a medical society for purposes of mutual betterment and the study of the social and economic side of the physician's life. It is planned to invite well known members of the medical profession throughout the State to address the class from time to time upon such topics.

Dr. Chas. S. Mangum, of the State University Medical School, who spent the summer doing special research work at Harvard, has returned to Chapel Hill and resumed the duties of his position.

Dr. Armistead K. Tayloe, of Washington, N. C., has been appointed by Gov. Craig to represent the North Carolina National Guard at the annual session of the National Association of Military Surgeons in Milwaukee.

Dr. Everett A. Sherrell, of Statesville, recent graduate of medicine, and widely known in both Carolinas in base ball circles as "Dusty Sherrell," has been appointed Ships Surgeon to the United States Steamer "Panama."

Gov. Craig announces the appointment of Mr. C. P. Matheson, of Taylorsville, N. C., to succeed the late J. G. Hall, of Lenoir, deceased, as a Director of the State Hospital for the Insane at Morgantau.

Shelby, Cleveland county, has a small hospital which, like many another similarly located institution in small towns, is doing good work for the community with meagre returns to its owners, and the local county paper has proposed that the citizens of the county regularly donate to the hospital all eggs produced on Sundays and figures it would add munificently to the hospital revenues and not impoverish the chicken raisers of the county.

Dr. W. I. Royster, of Raleigh, who was severely injured by being struck by a passing vehicle on the streets several weeks since is again able to be out and attend to business.

Dr. Hurbert A. Royster, of Raleigh, who spent the summer in Europe has returned to his practice.

Dr. W. C. Rose, of Laurinburg, who has been an assistant in Chemistry in the University of Pennsylvania a year and studying in Germany another year has accepted an appointment as Associate Professor in the Medical School of the University at Galveston, Texas.

Acting upon suggestions from the Asheville City Board of Health the public school system of that progressive city institute at the coming school session the study of domestic science as a branch of the regular High School curriculum.

The handsome annual volume of Transactions of the State Medical Society of North

Carolina, edited by the very capable secretary, Dr. John A. Ferrall, appeared the last week of August containing a full report of the June session of the State Society at Morehead City, the various papers presented, obituaries of deceased members of the profession, proceedings of the State Board of Health, State Association of Public Health Officers, and a number of tables containing valuable data relative to the Society. It is a most valuable addition to the excellent volumes the Society's members have become accustomed to in the past ten years especially.

The quarterly report of Supt. Dr. John McCampbell, of the Western Hospital for the Insane at Morganton, showed the presence in the institution of 1342 patients with more than 300 applications on file. The erection of the new \$50,000 building for the reception of women patients authorized by the last legislative session is proceeding, and when completed will afford accommodations for 150 patients. It will be used for women exclusively during the period of their first admission to the hospital prior to their classification and placing in their special departments.

Dr. J. F. Siler of the U. S. Army, for some time past stationed by the Federal Government at Spartanburg, S. C., in charge of the Thompson-McFadden Pellagra Hospital, has accepted the invitation of Dr. Louis W. Sambon, of England, to visit and study with him the pellagra situation in the West Indies.

Mr. Thomas Van Poole, of Salisbury, N. C., a son of Dr. C. M. Van Poole, has recently received the appointment to West Point Military Academy. We predict for young Mr. Van Poole a bright and successful future. His father is well known throughout this State. He was at one time president of the Medical Society of the State of North Carolina, and in addition to this he has held many important positions of honor in this organization.

The uncle of young Mr. Van Poole, Dr. G. M. Van Poole, is a surgeon in the U. S. Army and is now stationed at Ft. Washington, Md.

Following the closing of the State Sanatorium for Tuberculosis at Montrose by its Directors Sept. 15th, there was held a called session of the State Board of Health in Raleigh last week where a proposition from the Sanatorium Board of Trustees was considered by the Board of Health. By mutual consent a bill will be introduced in the present special session of the Legislature

providing the members of the State Board of Health shall become *ex-officio*, the Board of Directors of the State Sanatorium for Tuberculosis and abolishing the present Board of Sanatorium Directors. With the entire control of the State Tuberculosis Sanatorium in its hands, it is the purpose of the State Board of Health to inaugurate a State wide campaign of education for the management of tuberculosis, and especially to secure for as great a number of early stage patients as may be possible, a brief stay in the State institution where opportunities for learning how to care for themselves may be afforded. The plans of the Board of Health meet with the cordial approval of the present Sanatorium Directors who will co-operate in the efforts to secure larger results from the State's investment at Montrose.

Following recent consultations of the advisory Board and the active Board of Managers of the Mission Hospital at Asheville, and growing out of the manifest professional dissatisfaction of having a quasi public hospital with a permanent and non-rotating staff, it is officially announced that, beginning at the election in November, three new members will be biennially added to the staff. In this way a portion of the staff at least will be renewed each two years and the objections to further appropriations to one of Asheville's most worthy charities doubtless removed.

Dr. Chas. W. Stiles, in charge of the U. S. Public Health Service Service at Wilmington, N. C., has just returned from a four weeks campaign in parts of North and South Carolina and Alabama.

Surgeon Carter, of Washington, D. C., (U. S. Public Health Service) accompanied by Dr. John C. Rodman, of Washington, N. C., (local U. S. Public Health Officer), has just returned to his station after visiting a number of Eastern Carolina towns and holding public meetings in the interest of increased professional and public activity in the prevention of malaria.

Dr. J. H. Boyden, of Watauga county, has located at China Grove, Rowan county.

Following the report from the City Health officer to the effect that 74 per cent. of the cases of typhoid fever in Charlotte this season had occurred in persons using open wells and not city water from the Catawba river, and also the information that more than 90 per cent. of the specimens of well water examined had shown more contamination than the raw river water, the Char-

lotte Board of Health have ordered the disinfection and closing of the open wells in the city.

Charlotte Health Department (like Asheville) is to issue a monthly Health Department Bulletin for the dissemination of sanitary information and records among its citizens.

The annual session of the North Carolina Medical College in Charlotte began October 1st with the largest class in attendance in the 20 year's history of the school. Addresses were made by Prof. I. Wellington Faison, Prof. C. M. Strong, and Dr. C. B. McNairy, of Lenoir.

Dr. John R. Irwin, of Charlotte, has returned to the city after an absence of several months on account of a severe attack of ptomaine poisoning contracted at the meeting of the State Medical Society in Morehead City in June.

The Southern Life & Trust Insurance Co., of Greensboro, N. C., has announced a permanent policy of offering each policyholder an examination annually at the hands of a competent physician from the home office to enable the insured to early apprehend any malady and thus be better enabled to prevent disease development.

The Board of Managers of the Mission Hospital at Asheville announce the following recently elected staff:

Drs. M. H. Fletcher, Chas. S. Jordan, L. B. McBrayer, M. C. Millender, P. B. Orr, Paul Ringer, Arthur T. Pritchard, Joseph B. Greene, and A. W. Calloway.

Adjunct staff as follows: L. W. Elias, W. P. Herbert, O. F. Eckel, J. L. Adams, F. W. Griffith, M. L. Stevens. Dr. W. L. Dunn was elected Dean of the Nurses Training School.

Dr. Asa Thurston, of Taylorsville, is taking a postgraduate course in New York City.

Dr. E. M. Yount, of Statesville, announces his surrender of the lease of the Billingsley Hospital in that city to take effect Jan. 1st. As the city owns the institution it is expected that it will be re-opened promptly, and that it will be run as a general hospital by the city open to the profession and the public generally.

Dr. J. A. Caldwell, of Salisbury, is doing special work in Pædiatrics in New York City.

Dr. Wm. deB. MacNider of the University was the guest of honor at a dinner at the Country Club by the Mecklenburg County Medical Society on Oct. 3rd, and entertained the members present with an account of his recent studies in the circulation of the kidney.

BOOK NOTICES.

Minor and Operative Surgery, Including Bandaging. By Henry R. Wharton, M.D., Professor of Clinical Surgery in the Woman's Medical College, Philadelphia. New (eighth) edition, enlarged and thoroughly revised. 12mo, 700 pages, with 570 illustrations. Cloth, \$3.00, net. Lea & Febiger, Philadelphia and New York, 1913.

When a medical work has reached its eighth edition it may be pronounced a conspicuous success. Only a long continued and steady demand could make possible such a record, and this in turn must be based on intrinsic value. Wharton's Minor and Operative Surgery is a book of great utility and convenience. Its text is clear, and, wherever possible, is helped by its excellent illustrations, of which there are nearly six hundred, showing in many cases the steps of the various procedures. Many of them are photographs, and in the section on bandaging they are especially abundant. This new edition gives evidence of thorough and careful revision. All matter which has become obsolete has been omitted, and a large amount of new material has been added.

A Treatise on the Diseases of Women, For Students and Practitioners. By Palmer Findley, B.S., M.D., Professor of Gynecology, College of Medicine, State University of Nebraska; Gynecologist to the Clarkson Memorial Hospital and Douglas County Hospital; Fellow of the American Gynecological Society; Fellow of the American Association of Obstetricians and Gynecologists; Fellow of the Chicago Gynecological Society. Octavo, 954 pages, illustrated with 632 engravings in the text and 38 plates in colors and monochrome. Cloth, \$6.00, net, Lea & Febiger, Philadelphia and New York, 1913.

This new work offers a complete exposition of the subject of diseases of women, and brings out many points of view not generally emphasized in books on gynecology. A very important feature is the full discussion given to conservative methods of treatment, such as douches, baths, exercise, massage, diet, dress and tampons,

which rarely receive the consideration which their importance merits, either in books or in actual practice. Separate chapters are devoted to Non-operative Methods of Treatment, Hygiene and Dress, Preparation of Patient for Operation, Preparation of Operating Room, Field of Operation and Surgical Utensils, Choice of Anesthetics, Diet, Post-operative Complications and Care of Patients after Operation. Diagnosis has been placed on an anatomical basis, for it is pre-eminently true of diseases of women that the making of a diagnosis is in large part the recognition of the morbid anatomy. Another valuable feature is the presentation of certain subjects which may be considered as on the borderline between gynecology and obstetrics, for the separation of these two subjects is an illogical one. The book is very rich in its pictorial department, for in the text there are 632 engravings, besides 38 plates, many of which are colored. They have been inserted wherever it was possible to make clearer the point under discussion.

The Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. Sixth Edition, thoroughly revised. Octavo, 795 pages, with 439 illustrations, of which many are in colors, and 24 full-page plates. Cloth, \$5.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

Dudley is unquestionably one of the strongest books on gynecology in the English language. Ever since its original publication, fifteen years ago, it has occupied the foremost place among American works on this subject, and the appearance of this new edition serves to strengthen it in this leading position. Its splendid record is evidenced in the complete originality of its elaborate engravings and plates, a feature possible in very few publications. Each one is designed to illustrate some special point in the text, and numerous series of drawings explain operative procedures as they take place, step by step. In its pictorial department the work stands unrivaled. The arrangement of the book is another excellent feature. The subjects are presented in pathological and etiological sequence, so that the reader will have constantly before him the physiological and pathological unity of the reproductive system, and will see the correlation of like morbid processes to each other. The text shows that it has had thorough revision throughout. Several chapters have been entirely rewritten, and many new illustrations added. In its latest issue this standard work is well equipped

for a new period of usefulness as the recognized authority.

Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume II. Number IV. (August, 1913). Octavo of 206 pages, 49 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Published Bi-Monthly. Price per year: Paper, \$8.00; cloth, \$12.00.

This number is the largest and one of the most important so far issued. It contains an article of nearly 40 pages on Vaccine and Serum Therapy based on the clinical work at Murphy's Clinic and giving a full discussion of the subject by practitioners and pathologists. The great value of the article is the results obtained in the treatment of various affections and Dr. Murphy's deductions therefrom.

Dr. Murphy is one of the greatest surgeons in the country and has written a good many books on surgery.

A Manual of Otology. By Gorham Bacon, A.M., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York. New (6th) edition, thoroughly revised. 12mo, 536 pages, with 164 engravings and 12 plates. Cloth, \$2.25, net. Lea & Febiger, Philadelphia and New York, 1913.

The frequency with which new editions of this Manual are called for indicates a widespread popularity among practitioners and specialists, and shows that it fills admirably the important function of a students' text-book. Its many sterling qualities have resulted in its being "the standard manual of otology in the English language and a model for all works of a similar nature." It has never been approached in its excellent methods of presentation, and it stands practically without a rival in its special field. An examination of this new edition shows that it reflects the subject in its latest aspect. Many sections have been wholly rewritten and considerably enlarged. Emphasis has been laid on the most modern methods of diagnosis and treatment. The excellent series of illustrations has been increased by many new ones, which have been inserted wherever they could be of value in helping to an understanding of the problems under discussion.

Bovine Tuberculosis and Its Control. By Veranus Alva Moore, B.S., M.D., V.M.D., Professor of Comparative Pathology, Bacteriology and Meat Inspection, New York State Veterinary College at Cornell University, and Director of the College. Thirty full page illustrations, Ithaca, N. Y.: Carpenter & Company. 1913. It was long ago believed that the bacteria

of human and of bovine tuberculosis were identical and that large numbers of people became infected from diseased cattle. The sanitary significance of this affection in addition to its great economic importance has caused it to be very carefully studied in each and all of its phases. Although there is still much to be ascertained concerning it, knowledge of this disease has become quite definite in many respects.

This volume was written especially for the practitioners of veterinary medicine and health officers who during recent years have sought for a summary of the knowledge of bovine tuberculosis and its control. We find in it contributions from individuals, commissions, government laboratory workers, and State experiment stations.

It is well written, well arranged, and very appropriately bound. The volume contains 134 pages of text and thirty full page illustrations.

Diseases of Children. By Henry Enos Tuley, M.D., Late Professor of Obstetrics, University of Louisville, Medical Department; Visiting Physician Masonic Widow's and Orphan's Home, Louisville, Ky.; Secretary of the Mississippi Valley Medical Association; Ex-Secretary and Ex-Chairman of the Section of Diseases of Children, American Medical Association; Ex-President American Association Medical Commissions, etc. With One Hundred and Six Engravings and Three Colored Plates. Second Revised Edition. St. Louis: C. V. Mosby Company, 1913.

The general character of this edition is the same as that of the first edition but many chapters have been rewritten and additions made throughout the book because of the advancements and discoveries that have been made since 1909 along the line of pediatrics. The needs of the general practitioner and student have been, evidently, kept in mind throughout. New food formulæ have been added and the suggestive standards and methods for the production of certified milk as adopted by the American Association of Medical Milk Commissions have been reproduced in full in the appendix.

The illustrations in this volume are profuse and many of them rare, especially the frontispiece showing Koplik's Spots. These illustrations add much to an already valuable volume.

Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women. By William J. Robinson, M.D., Chief of the Department of Genito-Urinary Diseases and Dermatology, Bronx Hospital and Dispensary; Editor of the American

Journal of Urology, Venereal and Sexual Diseases; Editor and Founder of the Critic and Guide, 1913. Critic and Guide Company, 12 Mt. Morris Park, West, New York.

In this book we have a complete treatise on sexual disorders and their treatment with descriptions of actual individual cases, giving the individual symptomatology or individual treatment. When given in this manner the description becomes indelibly impressed on the memory and enables a physician, when he gets a case, to understand and classify it without a great amount of difficulty.

This book is written in the language that the author has been using for some time in his editorial and other writings, a personal, clear, straightforward and conversational manner. This is really a most impressive and convincing way of writing, and drives the message straight home.

This is the second edition of the book and it has been revised and enlarged, and a complete index added. The price of a cloth bound edition, 420 pages, postpaid is \$3.00.

A Practical Guide to Homeopathic Treatment. Designed and Arranged for the Use of Families, Prescribers of Limited Experience and Students of Homeopathy. By Myrom H. Adams, M.D., Consulting Physician to the Rochester Homeopathic Hospital; Member of the New York State Homeopathic Medical Society, etc. Philadelphia: Boericke & Tafel, 1913.

This volume sets forth, in the order of discovery and development, all the principles and claims of Homeopathy, together with definite instructions for their practical application. Special emphasis has been placed throughout the book upon the guiding principle for the selection of the remedy, namely, "Similia similibus curantur," rather than upon the "small dose" which no longer forms the "storm center" of discussion or opposition, but is rather becoming recognized as an integral part of a scientific and curative prescription. In the book we have presented to us the personal experiences of the author.

The publishers have given us this book in a very attractive as well as a durable binding. It contains 455 pages of text and is very appropriately indexed. It gives us pleasure to recommend it.

A Prisoner of War in Virginia 1864-5. By George Haven Putnam, Adj. and Bvt. Major 176th N. Y. S. Vols. Reprinted, with additions, from the Report of an Address Presented to the N. Y. Commandery of the U. S. Loyal Legion, December 7, 1910. Second Edition, with

Appendix Presenting Statistics of Northern Prisons from the Report of Thomas Sturgis, 1st Lieut. 57th Mass. Vols. With Illustrations. G. P. Putnam's Sons, New York and London. The Knickerbocker Press, 1912.

This volume is one that is interesting from start to finish. The incidents recorded are in themselves of interest, but the author's manner of telling them makes them yet more so. We have presented to us in a very clear, concise manner, the author's personal experience during the War of the Rebellion and also a study of the conditions and treatment of prisoners on both sides during this time.

The price of this book is \$1.00. It is neatly and beautifully bound, and contains several excellent illustrations.

Chloride of Lime in Sanitation. By Albert H. Hooker, Technical Director Hooker Electrochemical Company. New York: John Wiley & Sons. London: Chapman & Hall, Limited, 1913.

The data in this book was obtained by the research department of the Hooker Electrochemical Company. This chloride of lime we find is one of the most valuable and economical agents available for the protection, in many ways, of the public health. The several chapters each deal with a separate form of sanitation; this makes it much easier to grasp the subject. The reader who desires more information may find it in the chapter of abstracts where subjects can be traced further to the original sources of information.

This volume contains 231 pages, is carefully indexed, and attractively bound. It is a book that every physician should own and we take pleasure in recommending it to our readers.

Hospital of the Protestant Episcopal Church in Philadelphia. Medical and Surgical Reports of the Episcopal Hospital. Vol. I. Philadelphia: Press of Wm. J. Doran, 1913.

This volume is edited by Astley P. C. Ashurst, M.D. It contains much information, interesting as well as valuable, concerning the Episcopal Hospital. It contains a report from the superintendent, the abstracts of house cases, medical and surgical cases, report from the X ray department, reports from many peculiar cases, and different forms of treatment for different cases. The book is very attractively arranged and the articles contained in it are, of course by eminent physicians. The illustrations are profuse and excellent. The volume contains 406 pages.

The Career of Dr. Weaver. By Mrs. Henry Backus. Illustrated by William Van

Dresser. Boston: L. C. Page & Company, 1913.

We have in this fascinating little book the story of a young doctor who has drifted away from the high standards of his youth and failed to live in his air castle. He was spending his energy for wealth and prestige in the medical world when his plan is suddenly overturned. "Dr. Jim," the Doctor's brother, and "The Girl" both play very important parts in the story.

The book is a well-written, thrilling, and up-to-date little story. The price is \$1.25 net; post-paid \$1.40.

Stories of Doctors, For Doctors by a Doctor.

By Dr. W. T. Bertrand. Boston: The Rosburgh Publishing Co., Inc.

This book is made up of reminiscences; stories as told by seven physicians who undertook, for recreation, rest and recuperation, to spend their vacation together in the backwoods, away from the ding of telephone and constant call upon their services.

It so happened that the only physician the nearest village to their camp could boast of had gone away leaving the town folk, and those in the surrounding country, without medical protection. The people, understanding that the seven gentlemen domiciled at the log shack up the river were physicians, made sad havoc with their vacation; the fish and game they figured on bagging was conspicuous in its absence, the rest and recuperation turned to long hours of night visits, tramps and rides.

The constant calls made on them gives one an insight of what the country doctor has to face in his practice. Each evening, just before retiring, these seven physicians would compare notes and tell their experiences and practice of medicine, such as the laity seldom hear. The incidents told are, in the main, true and actually experienced by some of these doctors, and the physicians who are subject to these sketches are still in active practice.

We commend the book to all who enjoy stories well told. The price is \$1.00 by prepaid mail.

Progressive Spondylotherapy 1913. A Summary of New Clinico-Physiologic and Reflexologic Data with an Appendix on the Physiologic Physics of the Various Forms of Force. By Albert Abrams, A.M., M.D., F.R.M.S., University of Heidelberg, Honorary President of the American Association for the Study of Spondylotherapy; Consulting Physician to The Mt. Zion and French Hospitals, San Francisco; Formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College (Department of Medicine, Leland Stanford Junior Uni-

versity), San Francisco; Member of the American Medical Association. Representing the Additional Subject-Matter Included in the Fifth Edition of Spondylotherapy (Physio-Therapy of the Spine Based on a Study of Clinical Physiology). Philopolis Press, Suite 406, Lincoln Building, San Francisco, 1913.

The first edition of Spondylotherapy was published in 1910, and since that time four editions of the work have been issued. To avoid the necessity of a new edition, which has become imperative, this volume is designed to substitute the latter. When Spondylotherapy was first published, many statements seemed incredible and only the cognoscenti could interpret its true significance. The data in the appendix appears equally incredible but truth is established neither by convictions nor theorization. The maneuvers suggested by the author are simple and easily executed and judgment should be reserved until they have been tried.

The value of this book is easily seen when you have once read it. It is carefully indexed and contains many very appropriate illustrations. There are 218 pages of text.

The selling agent for this work is I. W. Long, Columbus, Ohio, 5 Wesley Block.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, assisted by Leighton P. Appleman, M.D. Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Volume III, September, 1913. Lea & Febiger, Philadelphia and New York, 1913.

This is the third volume of the quarterly known as Progressive Medicine. The subjects treated in this number are very interesting and are as follows: Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood vessels; Dermatology and Syphilis; Obstetrics; Diseases of the Nervous System.

The contributors to this Quarterly are always eminent physicians and the data given always up-to-date and first-class. The price per annum is \$6.00.

Grandmother Stories From the Land of Used-to-be. By Howard Meriwether Lovett, 1913. A. B. Caldwell, Publisher. Atlanta, Ga.

This book is made up of twenty-three short stories that are told by a grandmother to her grandchildren. The titles run as follows: The Ride of Ruth Sevier; Silverheels; The Lady Who Rode the Black Colt;

A. Nathan Hale of Arkansas; and Miss Mary and "Johnny Reb." All of them are interesting, to young and old alike, and have a moral as well. It certainly gives us a great deal of pleasure to recommend it to every one.

The book is neatly and appropriately bound and the illustrations quite attractive indeed, many of them copied from heirlooms.

The Strange Case of Dr. Bruno. By F. E. Daniel, M.D. Von Boeckmon-Jones Co., Austin, Texas.

Dr. Daniel, the well known editor of the Texas Medical Journal, has in this little book given us a story well worth the reading. It is the kind of a story that, once started, is impossible to lay down until finished. It makes us want to neglect our duties and even pleasures in order to read it. Dr. Daniel has blended religion, philosophy, love, romance, scientific knowledge and cruelty into a thrilling tale in a manner that is truly remarkable.

The price of the book, post-paid, is \$1.50.

New Uses for Petroleum.

It was hardly a dozen years ago that oil-burning locomotives and stationary engines began coming into general use in certain parts of the United States, the innovation receiving a strong initial impulse from efforts that were being made to find new uses for the output of the rapidly developing fields of California and the Middle Southwest. It was a striking case of increase of appetite growing by what it fed on; for, principally because of its high efficiency and the ease with which it could be handled, crude petroleum began replacing coal in steam engines of all descriptions at greater and greater distances from its points of production.

Before long it became evident that the fireman who remarked that "oil was better'n coal for ev'ry thing but to pick up in lumps an' fling at the heads of the cops when a strike was on," was speaking pretty near the literal truth. Nor was the astute stoker's objection one which told heavily when the question of the merits of the two fuels came up for debate at a board meeting. It also became clear that the extent to which oil would replace coal was subject only to the limiting factors of distance and maintenance of supply; that whenever a manufacturing plant, or the locomotives of a section of railway, could be operated anywhere nearly as cheaply burning oil as with coal, that the liquid fuel would always be given the preference. Through better storage facilities, the extension of pipe lines, and the employment of tank trains and steam-

ers, the "oil zone"—the territory in which the use of oil is economically preferable to that of coal—is being extended farther and farther from the fields which produce it and nearer and nearer to the coal-mining centers. The supremacy of oil in its ever-broadening sphere is now so well established that nothing except a falling off of the supply could cause it to give ground, and this contingency, thanks to the incalculable promise of the North American fields—especially those of Mexico and California—is not one that need be considered for many decades to come.—From "The Age of Oil," by Lewis R. Freeman, in the *American Review of Reviews* for October.

Abstracts of the Leading articles of the month.

Intratracheal Insufflation of Ether.

Crawford (Medical Press, London) gives the technique of intratracheal insufflation of ether, and describes an apparatus devised by himself. The advantages of this method of anæsthesia are: (1) Even and sufficient oxygenation is obtained, with no possibility of obstruction of the upper air passages. (2) Blood, mucus, or vomitus cannot enter the larynx. (3) Positive pressure can be obtained to any desired degree when one or both pleural cavities are opened by design or accident during the operation. (4) In operations on the head and neck, the anæsthetist is out of the way, while in goitre cases the trachea cannot collapse, and the breathing is therefore uninterrupted. (5) The quietness of the anæsthesia and the small and regular administration of ether make for diminished shock. (6) It is uncommon for operations under this method to be followed by vomiting.

Constipation and Skin Diseases.

Sibley (Medical Press, London) points out that the treatment of a large number of general skin eruptions resolves itself into the scientific treatment of chronic constipation. With regard to this most important fact in dermatology, it has to be realized that because a patient has a daily evacuation of the bowels it by no means necessarily follows that he does not suffer from all the morbid effects of toxic absorption from an overloaded colon. It is not the frequency of evacuation that is of importance, but the quantity; that is to say, that the contents of the large bowel are systematically completely removed, and that there is not an ever-increasing residue left behind. Most, if not all, of the drugs found of benefit in the treatment of general diseases of the skin, act chiefly, if not entirely,

as laxatives, aperients, or disinfectants of the gastrointestinal tract, and the author believes that their beneficial effect is due to their direct local action on the gastrointestinal contents, rather than to any specific action of the preparations themselves.

Pneumonia and Status Lymphaticus.

—McNeil and McGowan (*Edinburgh Medical Journal*) have studied a series of eleven outbreaks of febrile illness occurring within as many years in a boys' industrial school near Edinburgh. None of the administrative and teaching staffs were affected. Among the boys there were 20 cases of short, acute and rapidly fatal illness; 51 of pneumonia of peculiar and irregular character; and 175 of an uncomplicated but severe febrile attack. They state that these cases of febrile illness are cases of pneumonia; fulminant in those acutely fatal; irregular (apparently lobular) in the group designated pneumonia; and abortive or latent in the third group. Pneumococci and blood-stained sputum were obtained from cases in each group during life; and pneumococci were cultivated from the lungs after death in the fatal cases. Of the 20 fulminant cases, 12 died within a day and all within two days from the onset, and autopsies were held upon 14. In a significant proportion of the autopsies various lymph-glandular tissues of the body were noted as enlarged, and in 4 out of 5 cases where the condition of the thymus was recorded this organ was hypertrophied. They advance the hypothesis that the rapidly fatal cases were examples of pneumonia occurring in boys in whom the morbid diathesis termed status lymphaticus was present. Status lymphaticus has hitherto been commonly associated only with cases of death occurring suddenly from a variety of trivial and insufficient causes. If their conclusions are correct the term must be enlarged to cover rapidly fatal cases of infectious disease, usually termed fulminant, including such cases of pneumonia, of scarlet fever, of diphtheria, and probably of other infectious diseases.

Electrical Operative Treatment of Small Simple Tumors.

—Sibley, in the *London Practitioner*, points out the utility of electrolysis in the treatment of small superficial lesions such as sebaceous cysts. If the cyst is small, e.g., of the size of a pea or bean; a negative aluminum needle is inserted into its centre and a current of about five milliamperes is applied and continued for one or two minutes, after which the strength is gradually reduced to zero, and the needle withdrawn. No surgical dressings are required. In a few days the whole tumor will have shrunk, and as the cyst

wall has been destroyed by the current, it will not recur.

For larger cysts, a few drops of normal saline solution are injected into the centre of the tumor, and both positive and negative needles, made of copper, are then inserted into the centre of the cyst by separate openings, but fairly close together and parallel. A current of from two to five milliamperes is then turned on for from three to five minutes, according to the size of the cyst. Copper salt is rapidly deposited on and about the positive needle, and there may even be difficulty in withdrawing it unless the current is reversed for a few seconds before the operation is completed. Both needles having been withdrawn, the punctures are closed with a drop of collodion. In from four days to a week, the opening through which the negative needle was inserted will have enlarged and joined the other, and if a sufficient amount of current has been used, it will be found easy to enucleate through this opening the whole of the cyst contents together with the cyst wall; or, the contents may have escaped, of themselves, as a congealed necrotic mass. The loose skin over the cyst soon contracts, and little evidence of the previous tumor formation remains.

The tumors formed by *Molluscum contagiosum* are cured by the same process.

The operation can be rendered painless by the local hypodermatic injection of a 2 per cent. novocaine solution.

Ganglions are cured by inserting the negative aluminum needle into their centres, and using a current of from five to ten milliamperes for from one to five minutes. The treatment may be repeated in a week, if necessary.

Telangiectases are readily contracted and obstructed by the insertion of the negative aluminum needle for a few seconds; freckles and other pigmentary deposits may be dealt with efficiently in the same way.

Boils and carbuncles may be treated by puncture with a zinc electrolysis needle.

Incontinence of Urine in Children.—

Simpson, in *The Edinburgh Medical Journal*, points out that when a case of enuresis presents itself the first thing to be done is by examination to classify the case either as one of simple incontinence—that is, one without any definite pathological cause—or an incontinence of a graver character due to some well-marked pathological condition. After discussing various ætiological factors he deals with the treatment of simple incontinence. Regarding drug treatment he lays stress on the fact that the cases ought to be grouped according to the composition of the urine, and four such groups

are differentiated: (1) In some cases the urine presents no abnormal features. This "normal" condition is often seen in a case of incontinence following some debilitating illness, which has reduced the strength of the patient. For these cases belladonna in fairly large doses is advised. (2) The urine is found extremely acid, loaded with urates, of high specific gravity, and often diminished in quantity. Here one should try to reduce the acidity of the urine by giving citrate of potash in doses of 10 gr. thrice daily. (3) The urine is found to be neutral or alkaline, usually of low specific gravity, often containing triple phosphates, sometimes also a few pus-cells with a trace of albumin, frequently much increased in quantity. For such acid sodium phosphate may be proscribed. (4) Urine may contain bacilli. In these cases urotropine (5 to 10 gr. thrice daily) is often useful. If there is mixed infection salol is often more efficacious. Vaccine therapy may also occasionally be advantageous. In the author's experience thyroid treatment has been disappointing, but he thinks it ought always to be tried in those cases in which the child is markedly backward mentally. Various general, dietetic and hygienic measures are discussed.

Neosalvarsan and Salvarsan.—Krefting (*Berliner Klinische Wochenschrift*) reports the results of his treatment of 35 cases of primary syphilis during the last two years, beginning his treatment when the Wassermann reaction was still negative. Each received three salvarsan injections of 0.5 to 0.6 grm. in men, and 0.4 grm. in women, the interval between injections being from 14 days to three weeks. None exhibited secondary symptoms, and the Wassermann reactions remained negative. Two of these patients became re-infected. The writer has used neosalvarsan the last month in five cases of primary syphilis without Wassermann reaction, giving three injections to men of 0.75 grm., and to women 0.60 grm. at fourteen-day intervals. Three of the cases gave a negative Wassermann reaction; the fourth became strongly positive after the first injection and remained weakly positive after the third. One female case showed the same condition. None of the cases showed any secondary symptoms. He concludes that neosalvarsan is entirely efficient against the clinical manifestations of syphilis, but it does not seem so potent as salvarsan in preventing the development of the Wassermann reaction.

Typhoid Fever in Infancy.—Griffith (*Arch. of Pediat.*) analyzes 75 cases which occurred during the first two years of life. Nine were one year old or less, the youngest

being three months, 36 one to two years old, and 30 from two to two and a half; 65 were white and 10 colored children. In only 16 was the disease present in other members of the family. The disease was of decidedly shorter duration than in older children; the attack usually came on rapidly and was often sudden; in about one third of the cases it was more gradual. The symptoms of onset consisted chiefly of fever, diarrhœa, vomiting and loss of appetite, less often of cough, fretfulness and abdominal pain. The temperature rose rapidly, diarrhœa and vomiting were more common than in later life, prostration was seldom marked. Epistaxis was rare. In the developed attack the digestive symptoms were the same as those met with at the onset. Bronchitis was common but seldom important. The heart and pulse were seldom much involved. Nervous symptoms were not marked, the typhoid state of the adult being very exceptional. Only occasionally did the disease simulate meningitis. The temperature was not characteristic. The fall was often as rapid as the rise. The total duration of the fever was three weeks, or less in the great majority, and in at least a third only two weeks or less. Rose-spots were as common as in the adult, but appeared earlier, often from the fourth to the sixth day. Splenic enlargement was found in at least one half. Widal's reaction was as characteristic as in adults, and leucocytosis was usually absent. Thirty-one infants had some complication, a tendency to suppurative processes being commonest. Relapses occurred in three, the intervals between the attacks being fourteen, fifteen and five days. Twelve died—a mortality of 16 per cent., which is decidedly higher than in early childhood. Death was due in five to complications such as pneumonia or diphtheria and in seven to the disease itself. In only three were necropsies obtained. The appearances were similar in all. The spleen and mesenteric glands were enlarged and Peyer's patches and solitary follicles were swollen. Two showed very superficial ulceration, and one none at all. The treatment was symptomatic. Hydrotherapy was systematically employed. Cold baths were never given, the water used being of a temperature of 90° to 100° F. The diet was largely milk, sometimes broth, beef-juice and albumin water.

Anaphylaxis Due to Antidiphtheritic Serum.—Halle and Bloch (Ann. de Med. et Chir. Inf.) report the case of a child, aged 2½ years, who was admitted to hospital on September 8th with faucial diphtheria. Forty c.c. of serum were given on three successive days, the third dose being

followed by generalized urticaria. On September 12th another 40 c.c. were given; the rash increased and there were joint pains. Paralysis of the palate occurred, and later ocular paralysis. On November 2nd fresh membrane appeared in the fauces and extended to the palate and there were signs of croup. Forty c.c. of serum were given by the mouth. The child got worse, so the next day at 11:50 a. m. 40 c.c. were injected slowly subcutaneously. In a few seconds the face became pallid, then cyanotic and began to swell and the body and limbs relaxed. The pulse disappeared completely; respiration was irregular and hardly perceptible. The pupils dilated and became insensitive to light and the superficial reflexes disappeared. There was incontinence of feces and urine. In five minutes the respiration improved but was Cheyne-Stokes in character, the face became less cyanotic, and some purpuric spots appeared on the temples. Camphorated oil was injected and oxygen inhaled. By noon the breathing had become more regular but was stertorous and the pulse could not yet be felt. The rectal temperature was 103° F. At 12:30 p. m. the pulse could be felt but was too rapid to count. The child opened its eyes; after this the symptoms gradually improved. Strychnine and adrenalin were injected. The next day the child was better, the membrane less, but the urticarial rash lasted for a week. Later pneumonia set in and the child was again at the point of death, but finally recovered completely.

Necrosis of the Vertebrae Following Scarlet Fever.

—Riddle (Glasgow Medical Journal) reports the case of a girl, aged 3½ years, who had an attack of scarlet fever of the septic type, with severe ulceration of the fauces, and followed by bronchopneumonia. An attack of laryngitis necessitated tracheotomy. During the illness numerous abscesses developed, and in addition the patient had otorrhœa and nephritis. The laryngeal symptoms were very troublesome, and the urgency of these symptoms necessitated the re-introduction of the tracheotomy tube on several occasions. Two months after the commencement of the illness a small glandular abscess at the side of the trachea was opened, and about four months later a large fluctuating swelling suddenly appeared on the back, to the inner side of the right scapula. This was incised and a large quantity of foul pus was evacuated. On probing the wound necrosis of a vertebral spine was found. The child gradually sank and died twelve days later. Post mortem it was found that the spine of the first dorsal vertebra was necrosed, only a small portion remaining. The right lamina

also showed signs of necrosis. There was a small patch of necrosis in the spinous process of the second dorsal vertebra. The lungs, on section, showed evidence of tuberculosis and the mediastinal glands were caseating and breaking down.

The Association of Scarlet Fever and Measles—Talon (Arch. de med. et pharm. mil.) says the diseases may be said to be associated when one occurs within thirty days of the other. The association varies from 1 to 5 per cent. in different epidemics of scarlet fever given or measles. Owing to methods of hospital prophylaxis it is less frequently seen now than previously. Talon adopts the classification of Hutinel, (1) Measles preceding scarlet fever. The gravity of scarlet fever is more marked, especially if it develop soon after the eruption of measles. (2) Measles and scarlet fever occurring simultaneously. This is the least common association. The diagnosis is often difficult and the prognosis is grave, (3) Measles following scarlet fever. This is the most frequent association. Its gravity lies in the frequency of broncho-pneumonia. The paper contains an extensive bibliography.

Oxytocic Action of the Extract of the Posterior Lobe of the Hypophysis.—

Siguret (Arch. mens. d'obst. et de gyn.) says that for producing abortion the extract of the hypophysis has shown itself unreliable: To cause the expulsion of the placenta after abortion the effects have appeared variable. For inducing premature labor its effect has also been unreliable, the more so the longer before term it is used. In the clinic of bar the extract of the posterior lobe of the hypophysis alone was used. He found that the contractions became more frequent after each injection, and in the cases in which a second injection was made sufficient contractions were brought about to cause spontaneous delivery. Dilatation has always progressed rapidly after the injection; engagement and rotation happening very soon after the extract was given. The acceleration of dilatation was greatest as dilatation was already nearing completion. In the first twenty-seven cases the observer noted the tension, pulse of the mother, and the heart beats of the child. In the fetus the heart beat was not modified and the same was the case with the pulse of the mother. Thus the energetic action of the extract on the uterine fibers is proven and its assistance in accomplishing the delivery. In a rachitic woman thirty-one years old a rupture of the uterus was observed by the author after its use. Lastly the extract was used in Cesarean section to cause retraction of the fibers of the uterus.

It was found to cause hardening of the uterus; the amount of blood lost was small and the uterus retracted at once. The author concludes that the extract of the hypophysis is useful to bring about contraction of the uterus. Under its action the uterine contractions promptly become more frequent, strong, and effective.

New Method for the Differentiation of Certain of the Streptococci.—Crowe (Proc. Roy. Soc. Med.) describes a useful method for assisting in the identification of the various kinds of streptococci. The medium used consists essentially of Dorset's well known egg one, with neutral red as an indicator. In the resultant colonies, attention should be paid to three points, viz., (1) the color of the colony, (2) its shape, and (3) the effect, if any, in the surrounding medium. Of these, the shape is the most important. Streptococci may be divided primarily into two groups, according as they do or do not grow on the egg medium. The non-growers are chiefly confined to streptococci isolated from sputum. Crowe considers that his medium will allow of a further subdivision of the Andrewes-Gordon classification. Thus he has found the salivarius group to be divisible into three, according as the colonies are flat and yellow, or resemble a cottage loaf with fluted edges, or a broad-brimmed hat; and the pneumococci into two or perhaps three, viz., the pneumococcus, *Streptococcus mucosus* and *Streptococcus mucosus ii*. The *Streptococcus pyogenes*, he found, gave a crimson colony in shape like the impression of a "draughtsman" in a plasticine surface. Though many staphylococci indent egg-medium, very few streptococci do. Amongst the few were one of Professor Beattie's rheumatic strains, isolated from a case of malignant endocarditis, and another one from a patient who might have been suffering also from this disease. Both these organisms also liquefied gelatine. The article is accompanied by a colored plate showing the various types of colonies.

The Role Played by Fungi in Sprue.—

Castellani and Low (Journal of Tropical Medicine and Hygiene) state that the fungus theory of sprue is an old one. There are still a number of supporters of it. Le Dantec goes so far as to call the disease *Blastomycosis intestinalis*. Seven out of eight cases examined by the authors showed the presence of fungi belonging to the genus *Monilia*, of which one new species is described. A table is attached giving the sugar reactions of a large number of species of *Monilia*, mostly originally described by Castellani. The fungi are generally present in large numbers when the stools are

very frothy. By giving repeated large doses of sodium bicarbonate, which reduced the acidity of the intestinal contents, their growth is checked, and the patient benefits. In normal individuals in the tropics yeast-like fungi may also be found, and the authors conclude that sprue is not directly due to their presence, but that they may be contributory factors in aggravating symptoms. They think sprue will probably be found to be due to an organism of a protozoal nature.

Streptococcus Rheumaticus and Rheumatic Fever.—Harrison (Journal of Royal Army Medical Corps) has carried out various investigations as to the alleged relationships between this streptococcus and rheumatic fever. He summarizes his conclusions as follows: (1) The *S. rheumaticus* has a special vitality outside the human body, which serves to distinguish it from other streptococci; (2) inoculation of this streptococcus into rabbits in sufficiently large doses will produce arthritis and at times endocarditis; (3) inoculation of other streptococci will also produce arthritis at times, indistinguishable in character from that produced by the *S. rheumaticus*; (4) attempts to isolate the streptococcus from the blood failed in 26 cases; (5) streptococci were found in two joint fluids out of 27, but there was no evidence that they were identical with the *S. rheumaticus*; (6) attempts to isolate the *S. rheumaticus* from the throats of rheumatic patients failed; (7) treatment of six patients with a *S. rheumaticus* vaccine produced no results; (8) examination of the blood of rheumatic fever patients for antibodies to the *S. rheumaticus* produced negative results; (9) rabbits infected with *S. rheumaticus* are not benefited by the administration of sodium salicylate. His final conclusion is that there is no evidence that the *S. rheumaticus* is the cause of the usual kinds of rheumatic fever.

The Presence of Staphylococci in the Stools.—Schiller (Ann. de l'Institut Past.) has searched the stools of man and animals for staphylococci, in view of the fact that their products are so toxic. He finds that the *Staphylococcus albus* is not very rare in adults; it is rare in infants raised by hand or fed on the food of adults, and was not seen in the case of four infants on the breast. The fowl, mouse, rat, guinea-pig, rabbit, dog and chimpanzee nearly always contain it in their feces. In the two last, the *Staphylococcus citreus* may also be present. The mouth staphylococci do not appear to be the same as those found in the alimentary contents.

Treatment of Burns by the Application of Alcohol.—In the Australian Medical Journal Milligan has described a method of treating burns which he has found more satisfactory than the current methods. In burns of the second, third, and fourth degree, cleansing with antiseptic lotions is usually recommended. The moisture causes the sloughs to become septic—in other words, converts dry into moist gangrene. Frequent and painful dressings are then necessary. Milligan excludes water from the treatment, and applies alcohol. He thus prevents moist gangrene and inflammation and saves much suffering. A child, instead of spending several months in hospital, can soon have the burn grafted and run about. The details of the method are as follows: If the patient is in such a state of shock that he cannot stand an anesthetic, a watery saturated solution of picric acid is applied on lint and protective is put over this to prevent evaporation. On the next day the protective is lifted and more of the solution is poured over the lint, which is not changed. On the third day the patient is either obviously going to die or can stand an anesthetic. If the picric acid be continued any longer the burn will become offensive. Dr. Milligan has not found the picric acid treatment of burns satisfactory, and simply uses it in the absence of anything better for a patient in a condition of shock. Moreover, the acid is absorbed and may cause toxic symptoms. If the patient is in a condition to allow the administration of an anesthetic he is given chloroform, and the burns are cleansed with sterile gauze wrung out of 70 per cent. alcohol. The whole surface of the burn and the surrounding skin is rubbed vigorously. Blisters are rubbed off with all dead tissue. No blister is pricked, nor is the dead skin allowed to remain to keep fluid pent up only to be infected by the organisms of the skin. Dead tissue is more effectively and easily rubbed off than removed with scissors and forceps. After thorough cleansing a dressing of sterile gauze wrung out of the alcohol is applied. Over this dry gauze and wool are applied, and then a bandage. Under chloroform the same process is repeated daily. Every other day will not do, for the burns begin to be septic and offensive. The parts are rubbed, not wiped, with gauze wrung out of alcohol. On beginning to remove the dressing it will be found stuck to the surface. By pulling upon it bits of dead tissue are satisfactorily removed. The dressings are continued for about eight days, when burns which have not destroyed the whole thickness of the skin will be found in such a clean state that boroglyceride gauze or gutta-percha tissue can be applied

as a dressing without pain. It is striking how rapidly the burns now heal under the boroglyceride. If they become infected again, one cleansing with alcohol, followed by one alcohol dressing will render them again aseptic. Burns which involve the whole thickness of the skin take longer on account of the sloughs. Under the alcohol treatment these become black, dry, and shrivelled up; and can be torn off or dissected with a sharp scalpel and forceps. Valuable time will be lost if the surgeon waits for the sloughs to separate. The best results follow the cutting off of the sloughs, for they are not sodden, and the surface is aseptic. A scalpel must be used, for it leaves a clean cut, with no track of dead and injured cells as a scissors does. Dr. Milligan has employed this treatment during five months for a great number of burns in the Children's Hospital, Melbourne. One case of extensive and deep burns was fatal. Two large duodenal ulcers were found at the necropsy, but at the time of death (twelfth day) the burns were in an aseptic state, with all the sloughs removed. In all the other cases healing was most satisfactory. They included burns and scalds of almost all parts of the body, some deep, some on the face, and some on the buttocks, where cleanliness is difficult to maintain in young children. The daily use of chloroform did not prove in any way injurious. There was never any vomiting to interfere with the taking of food, so necessary for a burnt child. Anesthesia must be employed, otherwise the application of alcohol would be too painful. When the children recover from the anesthetic they feel no pain, and are quite happy.—The London Lancet.

Air in the Abdominal Cavity after Laparotomies.—Cohn (Deutsch. med. Wochenschr.) reported some interesting observations regarding air in the abdominal cavity. Systematic roentgenological studies showed that; after laparotomies, more or less air always remained in the abdomen. If the wound was sewed up, with the patient in the horizontal posture, the amount of air included was usually small. The greater the elevation of the pelvis and the more the wound was allowed to gape, the greater the amount of air remaining in the peritoneal cavity. After the abdomen has been closed, the location of the air within the peritoneal space is dependent upon the position of the patient, tending always to seek the highest levels. The air bacteria seem to be harmless and ill effects are produced only by the pressure of the included air upon the diaphragm and the bowels. Clinically, the presence of considerable air

in the peritoneal space closely resembles meteorism, and surgeons must remember that not every post-operative tympany is due to relaxed bowels. The air is completely absorbed in from eight to fourteen days.

Adrenaline in "Red Nose" Erythema.

—Rothmann (London Lancet). The vaso-constrictor properties of adrenaline were taken advantage of in three cases of erythematous taches of the face ("red nose"), two of the patients being men, aged twenty-four and twenty-seven years respectively, and the third a lady aged twenty-three years. Solution of adrenaline chloride, 1:1000, was given internally in 5 minim doses in water three times daily half an hour before food, and the treatment continued during five to six months with short intervals. The erythema almost entirely disappeared, and a year and a half after treatment it had not reappeared. No bad effect on the heart or blood pressure was observed.

Cardiac Effect of Adrenaline in Chloroformed Subjects.—Levy (British Medical Journal) in experiments on cats under deep chloroform narcosis found that if a small dose of adrenaline chloride solution (1 in 1000) be injected into a vein, there is a well

marked rise of blood pressure, and afterwards as the adrenaline effect develops there is marked irregularity of the heart. If the same injection be made into an animal under light chloroform anaesthesia the resulting action is more intense; in fact it is almost invariably fatal, the result of ventricular fibrillation. A similar effect is observed in man. The effects of adrenaline in a lightly chloroformed subject are acceleration of pulse with raised tension; it becomes more rapid; is less readily felt owing to diminished excursion, and it may or may not be perceptibly irregular at the wrist; a few temporary pauses may be noted, and then the heart suddenly ceases beating; the pupils dilate widely and intense pallor supervenes. Cessation of respiration usually follows. The author refers to several cases in which such syncopal attacks occurred, and in a few of which a fatal termination resulted. Reviewing the evidence he concludes that it is unsafe to inject adrenaline into the veins or vascular tissues of a patient lightly under the influence of chloroform. It may, however, be safely injected just previous to induction with chloroform—that is, with the patient under no anæsthetic at the moment, or in a patient fully under chloroform, or in a patient anæsthetized to any degree with ether.

Thyroid and Growth.—Gibson (British Medical Journal) cited an interesting instance of the effect of thyroid treatment on human growth. "The son of one of my medical friends," he said, "was in his eighteenth year, 1 in. below 5 ft. in height. He had set his whole mind upon entering Woolwich, for which his one and only chance was just about six months ahead. By the employment of thyroid extract the youth grew 7 in. in six months, and, as he obtained one of the highest places in the entrance examination for Woolwich, it was obvious that his cerebral functions had been in nowise disturbed by the treatment. . . . Another class of patient in whom we find thyroid extract invaluable consists of children and youths who manifest mild myxœdematous features—they are not for a moment, however, to be regarded as cretinoid. In many of these young people, along with satisfactory growth as regards height, there is rather too much corporeal bulk and rather too little cerebral energy. Under thyroid treatment they become more slender, and the sluggishness of the intellectual processes entirely disappears."

On Sleep.—Riviere (School Hygiene) explains the physiology of sleep by (1) cerebral anæmia as evidenced by the ophthalmoscope, by the increase in volume of the extremities, and by diminished blood pressure; (2) loss of irritability of sensory and association fibres in the cortex; (3) voluntary avoidance of stimuli exciting the vasoconstrictor centres. Dval's theory of the retraction of the dendrites of the brain cells is also referred to. Sleep is deepest at the end of the first hour and up to the fifth hour. As sleep becomes shallower, ideas, unrestrained by will, rise into consciousness and give rise to dreaming. Eight hours are required for adults and more for growing boys. In the English public schools the time allowed is far too short; nine hours in summer and nine and a half in winter should be enforced, the extra half hour in winter being required by the greater loss of heat and more active exercise. Ravenhill, studying elementary school-children, found that "entrants and leavers" lost an amount of sleep equivalent to one night in every four, and those at intermediate ages one night in every five. Attendance at markets, choir practices, bands of hope furnish the explanation. The quality of the sleep of the poor suffers by bad ventilation, vermin, and noises. The immediate results are loss of mental and physical vigor, mental irritability, and depression. Illustrations of scholars' handwriting on full and short hours of sleep are given, and the loss of judgment, memory and muscular co-ordina-

tion is well shown under the latter conditions. Fainting attacks of a type liable to be mistaken for minor epilepsy are attributed by Dukes to lack of sleep. For the boarding school the author recommends no rising till 7:30, and no work before breakfast. For the elementary school child two hours of sleep should be placed in the daily curriculum.

Adenoids, Nocturnal Enuresis, and the Thyroid Gland.—Williams (Medical Press and Circular) is of opinion that many cases of nocturnal enuresis are due to deficiency of the thyroid gland secretion, and he advocates treatment by means of thyroid extract. Careful investigation will reveal in many of these patients the stigmata of cretinoid degeneration. Particular stress is laid on the following in this connection: (1) A persistently subnormal temperature; (2) a deficiency in height and weight; (3) abnormalities of the skin and its appendages, more especially the hair, not only of the head, but also and particularly of the superciliary region. Only small doses of thyroid extract should be given; the initial dose should not exceed $\frac{1}{4}$ grain three times daily. Signs of intolerance have occasionally been noted, and of these, nasal catarrh is the most constant, tachycardia being less often met with. To control scientifically the administration of the drug, the child should be regularly weighed, but even more important, the temperature should be frequently taken. So long as the subnormal readings persist, the drug may be continued; as soon, however, as the temperature reaches normal, caution is necessary; and at the first indication of a rise beyond normal, the drug must be suspended. Many cases are recorded, and the results obtained have been most satisfactory.

The Diagnosis and Treatment of Early Cardiac Complications of Rheumatism.

—Lees, in the British Medical Journal, points out that "acute and subacute rheumatism" is a bacterial infection, most common and most virulent in childhood, less common and usually less virulent in adolescents and in young adults. There is but one symptom which is present in every case of the disease. Arthritis, nodules, endocarditis, pericarditis, pleurisy, tonsillitis, erythema, chorea, and all other rheumatic symptoms may be present or absent, but dilatation of the left ventricle is invariably present. This dilatation is caused by toxæmia or myocarditis, or both combined, and it is a very early symptom. The dilatation can easily be detected by careful percussuion, rightly performed. It is quite easy to determine accurately the sloping line of dulness of the edge of the left ven-

tricle in the fourth and fifth left interspaces, and that of the right auricle in the fourth right interspace. The first essential for the successful treatment of the cardiac implication of rheumatism is prolonged rest, and in the case of the child this means rest in bed. The second essential is an adequate anti-rheumatic medication. Sodium salicylate in large and gradually increasing doses, combined with sodium bicarbonate in the proportion of one of the former to two of the latter, should be given. During this treatment it is important (1) to prevent constipation, (2) to keep the urine slightly alkaline, (3) to stop the medicine when symptoms of salicylism supervene, but to resume the salicylate after a few hours in a dose of one half the size of the dose last given, and soon to increase the amount as far as possible. When the dilatation (with or without endocarditis) is great, and especially when pericarditis is present, the medicine should be freely given and an ice-bag should be kept permanently over the præcordial region, with due precautions against general chill. Careful nursing is essential. The application of leeches is often beneficial.

Chorea and Its Treatment.—Charles, in the Dublin Medical Journal, says that chorea is due to an intoxication of the system. While he admits the constant association of chorea and rheumatism, he dissents from the view held by many that chorea is a rheumatic manifestation due to a general infection of the whole system with the toxins of rheumatism. He thinks that the toxins in each case are different, but that a rheumatic diathesis is conducive to an attack of chorea. After discussing the symptomatology he examines the indications for treatment. In the first place, treat the diseased neuron by rest, restrain your patient in bed, and, if thought necessary to exclude all superfluous sensory stimuli, isolate the individual. Secondly, control the movements with the free use of trional, thereby producing both mental and physical rest. Thirdly, improve the general health with tonics and a good nutritious diet, from which tea and coffee are excluded. To be of service it is necessary that the trional should be given in large doses.

Thyroid Extract in Sterility.—Weil (Munchener Med. Wochenschr.). In certain cases of sterility the cause of the condition may lie in a lack of correlation of function between ovaries and thyroid gland. During menstruation and pregnancy the thyroid swells, while in castrates the latter organ may be seen to be atrophic. The administration of thyroid extract may therefore be of service. The author reports three

cases of apparently permanent sterility, in which the administration of thyroid extract was followed by conception. There appears to be no doubt that the thyroid hormone, artificially supplied, determined a physiological congestion of the ovary, which promoted conception.

Combined Bromide and Thyroid Treatment of Epilepsy.—Sicard (Jour. de Med. de Paris) points out that the tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet 0.1 gm. ($1\frac{1}{2}$ grain) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 1 gm. (15 grains), of potassium bromide are given daily at equal intervals, say at 10 a. m. and 10 p. m., apart from meals, and dissolved in half a wineglassful, or less, of water. The bromide is to be given regularly without suspending the treatment. A chlorine-free diet is enjoined, and should acne appear, the pustules are to be treated with an application of chlorinated soda solution and sulphur ointment.

Thyroid Extract in Carcinoma.—Jones (British Medical Journal). A case of multiple carcinoma of the skin and subcutaneous tissue, in a widow aged 61, is described. The original growth had been removed a year previously, but other growths had since appeared, and the patient's health was suffering severely. Thyroid medication was tried cautiously, starting with 5 grains daily, gradually increasing to 10 grains, and finally to 15 grains daily. The patient quickly showed signs of improvement; the palpitation, sickness, and emaciation gradually disappeared *pari passu* with the gradual disappearance of the growths. In less than three months they had entirely disappeared, the patient was practically well, and had recovered her lost weight of 3 stone. This occurred in 1901, and the patient was still well and had not suffered since.

Parathyroid Insufficiency and Its Treatment.—Morel (Paris Medical) gives a full and interesting review of the work already done on the parathyroids. The author describes the various conditions that interfere with their function, which is the destruction of certain toxins in the system; and he points out how any interference of that function hinders this destructive power, giving rise to tetany of some form or other. A sketch of the thyro-parathyroid apparatus is given. The various conditions produced by parathyroid insufficiency are described, and the connection of such insufficiency with bone-formation is referred to.

Treatment is described under the headings of (1) calcium medication; (2) various drugs (chloral, bromide, etc.); (3) parathyroid opotherapy. Specific treatment, in the form of parathyroid grafting, is also described.

Treatment of Syphilis by the Combined Salvarsan-Mercury Treatment.—Scholtz and Riebes (Deutsch. Med. Woch.) remark that they have repeatedly drawn attention to the remarkable curative effects of the combined treatment of syphilis with salvarsan and mercury, and have pointed out that they are able to obtain surprisingly good lasting effects. They are convinced of the possibility of curing primary and secondary syphilis with one single treatment, as suggested and used by them. On account of their experiences they think themselves justified to claim conditionally a cure of syphilis in these cases.

The method originally used was to inject on two subsequent days moderate doses—about 0.3 grams salvarsan—followed up with an intense mercury treatment (combined inunctions and injections). Then the same salvarsan treatment is repeated with another mercury treatment. The principle is to keep the salvarsan in the circulation for a longer time.

Within the last year this method was modified so that the authors gave at least three injections instead of two and very often four salvarsan injections were given on two successive days. They now give at 9 a. m., 0.3 grams salvarsan, and between 12 and 1, 0.2 grams. The following day in the morning 0.3 grams is administered and in some cases 0.25; at noon 0.2 or 0.15, so that the patient is given between 0.9 and 1.0 grams salvarsan within two days (strictly speaking 28 hours).

In cases where they inject only three times, they usually give three times 0.3 gram. Only in weak patients and in women, do they reduce this dose to 0.5 gram, which is given as a rule in three injections. If there are any contraindications against even medium doses of salvarsan, such as prodromal symptoms, headaches, marked symptoms of cerebral lues, fever or albuminuria, they begin with 0.2 or even with 0.15 gram and only increase the second dose if the first dose is well tolerated to 0.25 or 0.3 or give instead four injections of five smaller doses. They assume that salvarsan acts energetically as long as it circulates as such. This, however, is only the case from 3 to 4 hours after an intravenous injection, no matter whether 0.3 or 0.4 or 0.6 gram have been injected at once. It is of course possible to obtain a definite cure with salvarsan alone if the injections are repeated often enough, but occasional

observations have shown that the combination with mercury is at least of great advantage and that the combined treatment, even if badly carried out, shows far better results than a mercury treatment alone. The authors were able to control their cases very well, and draw from this material these conclusions

The permanent results obtained with the combined salvarsan-mercury treatment carried out as described, justify them in saying that with this treatment a definite cure of the disease will be obtained in the majority of cases.

The percentage of cures with this combined treatment is in primary syphilis, even with an already positive Wassermann reaction, from 90 to 100 per cent.; in early secondary syphilis, from 80 to 90 per cent.

Picric Acid and Camphor Cure Ringworm.—Agnes Savill (London Practitioner) praises strongly Williams' formula for the treatment of ringworm, this consisting of picric acid, 7 grains, camphor $\frac{1}{2}$ ounce and rectified spirit $\frac{1}{2}$ ounce. Dr. Savill used this mixture with gratifying success in fifty cases, of which full records were kept. She secured cures in cases which had been treated for months with other remedies without success. She says that among the nurses and mothers of the neighborhood of the Children's Hospital, where the treatment was given, acquired the reputation of being able to cure ringworm within three weeks. Dr. Savill makes a number of suggestions regarding technique. First, no other applications should be made; second, all the camphor in the lotion must be dissolved; third, the hair must be cut around the diseased patch in the usual way and the lotion painted on night and morning; fourth, the yellowish powder forming on the skin must be lightly washed away twice a week, in order to insure fresh applications reaching the scalp; fifth, the hair should be clipped or shaved off two or three times a week, otherwise the lotion will not penetrate to the scalp; sixth, loose hairs must be removed with the epilator forceps, being careful not to break them off. Chloroform rubbed over the patch gives the diseased hairs a frosted look which makes them easy to locate.

Tuberculosis in Childhood.—Hamburger (The British Medical Journal) says that an infant is as susceptible to infection with tuberculosis as with measles, and only a single short contact with a patient suffering from advanced pulmonary tuberculosis is sufficient to cause a primary lesion which in 75 per cent. is situated in the lungs, and in 5 per cent. in the skin, intestines, or reproductive organs. In one case a child

aged 11 months, developed tuberculous meningitis without having been exposed to infection, according to the mother. Careful investigations revealed, however, that a consumptive had once played with the child for half an hour six weeks earlier. Another child had been kept in hospital for five months on account of nocturnal enuresis. During the first four months weekly tests with tuberculin were negative. One day the child played with a consumptive in another ward for half an hour, and five days later the tuberculin test was positive. The primary lesion in a child's lung varies from the size of a cherry stone to that of a cherry. Children who die from other causes than tuberculosis, and who have daily been exposed to tubercle bacilli for several months, seldom harbor more than one or two, or at most three, tuberculous lesions in the lung. The primary lesion has therefore clearly conferred a certain degree of immunity, just as a chancre confers immunity from a second syphilitic infection. In towns children between the ages of 12 and 13 years who die of other diseases than tuberculosis, or who are tested with tuberculin, show that infection has already occurred in 95 per cent. In the first year of life infection has occurred in only 1 per cent. In the second year this percentage has risen to 10, in the third and fourth years to 30, in the fifth and sixth years to 50, and in the seventh to tenth years to 75. The death rate from primary tuberculosis among children infected in the first year of life is about 80 per cent., and the disease is active in almost 100 %. The death rate from tuberculosis among children infected in the second year is between 10 and 20 per cent., and it is only 3 to 4 per cent. among children infected in the third to the sixth year of life. After this age it is scarcely 1 per cent. It follows, therefore, that isolation from consumptives of children under three years is of supreme importance. The sputum flask and other contrivances against infection are futile, and can never prevent infection *per se*. After the age of three prophylaxis against infection is no longer as important as prophylaxis against an outbreak of tuberculosis already grafted on to the body. The most important measures are those which affect the child's general health and well-being. Cod liver oil, with or without creosote, is the best medicine. Tuberculin can usually be dispensed with, and its vagaries are yet so little understood even by the specialist that its use in general practice is undesirable. Above all, large doses of tuberculin must not be given. Hitherto more harm than good has been done by tuberculin among children. It is also seldom necessary to use it for diagnosis, which

should be based on clinical methods. The prognosis must largely depend on whether an active tuberculous lesion is primary or secondary. The latter is the most serious, and when pleurisy with a serous effusion immediately follows a primary infection the prospects of recovery are relatively good. This point is illustrated by the case of a child, aged three years, who developed caries of the right index finger. Recovery occurred in a few weeks. But two years later an injury to the finger caused a relapse which ended in the destruction of the bone, in fistulae, and chronic suppuration. The prognosis must also depend on the date of the primary infection, and the earlier this has occurred the worse must the prognosis be. He points out that only by study of tuberculosis in children can this disease in adults be understood, and that the researches of the past six years have made clear much that was hitherto obscure in the etiology of tuberculosis in children.

X-Rays in Palmar Disease.—Davis (British Medical Journal) calls attention to the value of x-ray treatment in diseases of the hands, it being obviously very inconvenient to keep these almost indispensable appendages continually swathed in bandages, as is necessary if treatment with ointments is to be successful. He reports three cases of disease of the palm, two being palmar eczema and one palmar psoriasis, in which this treatment was carried out with success.

Acute Prostatitis. Sanmetto.

In the treatment of acute prostatitis, salicylic acid internally in five-grain doses, and sanmetto in teaspoonful doses tends to diminish the source of infection, reduce the existing inflammation, and encourage resolution. The sanmetto being a mild, soothing resolvent diuretic also tends to allay the suffering of patient. If the urine is acid citrate of potassium in ten-grain doses will aid in relieving irritation and tenesmus. As further measures for reducing inflammation, light diet, absolute rest in bed, free movement of the bowels, and local application of heat by means of sitz baths, or hot water bag, should be enjoined. If the sanmetto is kept up urinary retention is not likely to supervene, unless there is a previously hypertrophied prostate; in that case the bladder should be emptied by a soft catheter at intervals, still keeping up the use of sanmetto. The prostate should not be massaged during the inflammatory state, but during the period of resolution massage will aid the process.

Uses of Tincture of Iodine in Ophthalmological Work.—Jacqueau (Lyon medical) points out that tincture of iodine, appropriately employed, is by no means as irritating to the eye as one might suppose, but constitutes a most excellent antiseptic agent in eye work. He found that an aqueous iodine solution presents no advantage over the tincture, but on the contrary seems to possess less penetrating power.

In long standing glandulociliary blepharitis, with crusts and ulcerations, the effects of a few careful applications of the tincture at the roots of the lashes are superior to those obtained with yellow ointment. Whenever iodine is used on or near the eye, however, it is necessary first to instill one or two drops of a three to five per cent. solution of cocaine into the conjunctival sac. This will effectually prevent local irritation and lachrymation.

In traumatic corneal ulcers with incipient infective manifestations tincture of iodine is deserving of widespread use, as it often arrests the morbid process and in the other instances will so delay its progress as to permit of ultimately saving the eye. After cocaineization, and with the lids held apart with the fingers, the tincture should be applied to the affected area by means of a narrow wisp of cotton twisted on the pared end of a matchstick. The patient should be required to fix his gaze on a distant point during the procedure and the lids should be held apart a few seconds after the application, to allow the tincture to dry on without becoming mixed with the lacrymal fluid. Under these conditions, no pain results, there is practically no diffusion of the drug into the healthy tissues. In severe cases the procedure may be repeated without hesitation, daily or even twice a day.

He advises the use of iodine in operative work on the globe and cornea, especially in the cataract operation. On the day before, and where there is particular fear of complications, several days before the operation, the tincture should be carefully painted on the lid margins. This is to be repeated immediately after the operation, and in addition, a little of the tincture should be applied over the line of the corneal incision. While the fact that this procedure was followed by the author in thirty-seven cases of cataract operation without a single case of infection proves nothing, the results seemed superior in this series of patients to those generally obtained, in that the eyes were regularly found quiescent and free of all irritative redness at the first dressing, and healing appeared to take place more rapidly than usual in the majority of cases.

Casein-fat Milk as Food in Disease and Health.—Heim and John (Monatsschr. f. Kinderheilk.) give the results obtained by them in the use of the so-called casein-fat milk in healthy and in sick infants. They fed forty-five healthy children, beginning between the end of the second week of life and the fourth week, with casein-fat milk and continuing to the end of the seventh month. The children were at the end of that time all in good condition; the color, sleep, appetite, absence of dyspeptic processes, activity, motility, and all the bodily functions remained normal. The skin and mucous membranes were normal, in contrast to the eczematous conditions frequently observed in children fed on cow's milk. The milk is prepared by heating to 40° C. with a coffeespoonful of labessence, causing a complete coagulation. The curd is then thoroughly broken up by stirring, when the cheese is pressed through a fine hair sieve, allowing the whey to run out. The remaining curd is mixed with two-thirds as much warm water and pressed through the sieve. An almost homogenous fluid remains. This is placed on the fire to boil for three minutes. Then one-third hot cow's milk is added and 30 grams of Sexlet sugar, and the mixture is put in a cool place. When this milk is given to young healthy children their nourishment is perfect, and when given to dyspeptic children the good effects are very soon apparent. The stools become fewer, consistency and color normal, body weight begins to increase and diuresis is apparent. The number of feedings can be reduced. Increase in weight, and in growth in length, ossification of the bones, and function of the bodily organs are all found to be normal under this feeding. If constipation is caused it can be combated by the use of milk sugar. The effect of this food on dyspepsia is seen in twenty-four hours. The food agrees with very young infants, in whom cows milk causes dyspepsia. The bad effect of cow's milk on the nervous system is done away with.

Pseudoeclampsia.—Croom (Jour. Obst. and Gyn. Brit. Emp.) mentions two cases which closely simulated eclampsia, but in both of which cases the feature of toxic eclampsia, namely, urinary changes, was entirely absent. A clinical picture very similar to that of eclampsia may occur in cases of diseases of the meninges, cerebral tumors, some forms of epilepsy and hysterio-epilepsy. It has always been a difficulty to account for the occurrence of eclampsia without any urinary change. Such cases are recorded in most text books as cases of eclampsia without albuminuria. Recogniz-

ing as is now done, that eclampsia properly so called is toxic in its origin, the absence of albumin would, a priori, render the diagnosis of a pure eclampsia untenable. Want of differentiation of these cases has led to quite a number of cases being recorded as eclampsia which were not at all toxic in their origin, and no doubt has led to a very considerable misinterpretation of the value of various methods of treatment.

Treatment of Eclampsia in the Working Classes after the Stroganoff Method.

—Strumpel (Zeit. f. Geb. u. Gyn.) says that among peasants in isolated communities it is not easy in cases of eclampsia to remove the woman to a properly managed maternity hospital, as should theoretically be done in this serious disease. There may be no hospital within many miles, and no means of rapid removal when one is near. Therefore it is necessary in these cases to treat the disease in some manner that shall give reason to hope for life for mother and child. The author has had an unbroken series of four recoveries in eclampsia under the use of this method. He insists that the room be made dark and quiet, and all persons except those taking care of the patient be excluded from the room and house. The writer first injects into the rectum Stroganoff's chloral solution, using a syringe holding 10 grams, and injecting one to four syringefuls. As soon as the power to swallow has returned after the convulsion, he gives the same solution by mouth, and morphine by hypodermic or mouth: The husband or the midwife may now watch the case, keeping in telephonic communication with the physician. The effect of the treatment is to calm the nerves, stop the convulsions, increase the urine, lessen the albumin and permit of feeding with milk.

Pituitary Extract in Obstetrics.—Fuchs (Zeit. f. Feb. u. Gyn.) says that when pituitary extract was first introduced it was with the feeling that it was an absolute specific for exciting uterine contractions. Although this hope has not been fulfilled, it has been found of great value in obstetrics. He gives histories of six cases treated by him with pituitary gland, a preparation in which 1 c.c. of the solution corresponds to 0.1 of the gland. It was used by intramuscular injections. The cases were one of primary inertia with hydramnios, two of secondary inertia, with abnormal presentations, one of instrumental abortion by bougies, one of placenta previa lateralis with premature rupture of the membranes, and one of ten weeks' abortion to remove the ovum. The author finds that by the use of the extract the uterine muscle is quickly stimulated to contraction, so that

the other means used for delivery are facilitated. It increases the contractility of the bladder so that catheterization is not needed, it assists the bowel to act, and it aids the heart and increases the blood pressure. Thus it is of notable assistance, although not infallible in its action.

Physiology of Milk Secretion.—Schafer (Medical Press and Circular) says that the flow of the mammary secretion is induced as the result of galactagogue hormones circulating in the blood. Such hormones are produced in largest quantity in the posterior lobe of the pituitary body, but are also yielded by the corpus luteum, by the involuting uterus, by the lactating mammary gland itself, and, perhaps, by other organs. Hormones which are formed during pregnancy in the tissues of the fetus and in the placenta possess the property of inhibiting the activity of the galactagogue hormones. There is no distinct evidence that the mammary secretion is directly influenced by the nervous system, for the secretion is carried on in a normal manner after severance of the nerves passing to the organ. Since the fact is well ascertained that nervous influences do affect the milk, this can only be either by their influence on general nutrition or by their effect on the production and pouring out of the galactagogue hormones. Drugs such as pilocarpine and atropine which probably influence the secretion of glands mainly if not entirely through nerve endings, have little or no direct influence on the secretion of the mammary gland.

Continuous Intravenous Infusion.—

Friedman (Munchen. med. Wochenschr.) mentions the value of this procedure as a substitute for subcutaneous and intramuscular infusion of saline, as being less painful and quicker in its effects. The rectal infusions by the drop method, although valuable, are not applicable in certain cases on account of weakness or inability to retain the fluid in the rectum. The technic advised for the continuous infusion is carried out as follows: A glass canula is introduced into the median basilic or median cephalic vein and held in place with adhesive straps. The canula is connected with a glass funnel in the course of which a glass bulb is inserted so that the rapidity of the flow may be seen. The latter is regulated by means of a clamp and the patient's arm suspended in a vertical position. According to the quality of the pulse from two hundred down to fifty drops or less of fluid per minute are administered. In case cardiac weakness is present digitalin may be added or in the presence of vascular shock adrenalin. The infusions have been em-

ployed by the author for periods of from five to twenty-three hours and from three to five liters were used in the individual cases. The solution is given at body temperature and it is not necessary to provide any method for keeping the same warm. Friedman has employed the procedure in exhausting dysentery, ileus, carcinoma of the stomach, infectious diseases with marked collapse and vasomotor paralysis, including peritonitis and sepsis. The method was successfully employed in twenty cases without any complications.

Changes in the Viscosity of the Blood in Women.—Engelmann and Elpers (Gynak. Rundschau) discuss the behavior of this property of the blood in eclampsia as well as in other diseases of women. They used Hess's apparatus and found from an examination of twenty-nine cases in the last two months of pregnancy that the viscosity of the blood is considerably reduced, the average being 3.6 to 3.7 in contrast to 4.22 to 4.38 in the normal non pregnant woman. In eclampsia the viscosity is markedly increased as a rule, for in eleven cases the average measurement was 5, corresponding to about 4 per cent. Venesection combined with intravenous infusion is an excellent method of reducing this increased viscosity and thereby reduce the damage brought about by such changes. In the different varieties of genital hemorrhage a more or less marked reduction of the viscosity of the blood results. The lowest measurement was 2.6 in a case of severe bleeding from fibroids. In the presence of inflammatory and purulent processes the viscosity is increased. Thus in ten cases the average figure was 5.35. In ten instances of ectopic gestation the average reduction in the viscosity resulted in a measurement of 3.73. In the newborn the viscosity was considerably increased over that of the maternal blood.

Treatment of Simple Fractures.—Cathcart (Edinburgh Medical Journal) remarks that in the treatment of simple fractures three methods have their advocates—the old form of rigid immobilization, the massage and early movement of Lucas Championniere, and the immediate operation as advocated by Arbuthnot Lane. The following fields of application for the different methods are:

1. The rigid immobilization method may now be modified since the massage and movement method has shown that some movement is no obstacle, but rather a help towards union. It is seldom necessary to secure the joint above and the joint below the fracture unless for comfort, and the limb may be massaged and the joints moved

as often as convenient. This modified immobilization method gives good functional results in children in most fractures of the shafts and in adults in the same fractures (shaft of femur excepted) if there is no great displacement of the fragments nor severe laceration of soft parts. In fractures of the femur in adults, however, prolonged fixation is apt to lead to trouble in the knee, as will be explained.

2. Massage and early movement give more rapid results than modified immobilization in the classes of case just mentioned, although the final results may not be much better. It is also the method of choice for fractures near or involving joints, such as fractures of the olecranon, and many fractures involving the elbow in children, so long as they do not require immediate operation (see next paragraph), and in fractures of shafts with much laceration of soft parts and irregularity at the seat of fracture, so long as there is not much angular or axial deformity nor necessity for complete restoration of length of limb as in the lower limb of men in the public services. It is also to be preferred to the modified immobilization method in fractures suitable for operation which is contra-indicated by the patient's age or constitution, to local sepsis or other cause.

3. Immediate operation when reliable technique is available is the method of choice in transverse fracture of the patella in healthy adults, in joint fractures when the fragments mechanically hinder movement, when the important muscular attachments are torn off and cannot be approximated, when a nerve is involved or soft parts prevent the fragments from coming into contact, when angular and axial deformity cannot be restored by manipulation or posture, especially in the lower limb or when the occupation necessitates walking without a limp, as in the army or police force.

Sometimes the swelling after an injury makes it difficult to diagnose the exact seat of the fracture and the position of the fragments. In doubtful cases a skiagram should be taken as soon as possible; failing this, a careful examination under chloroform is advisable with accurate comparison of the injured with the sound limb by measurement, after the best possible restitution.

Delayed Chloroform Poisoning.—Fischer (Publication 6, issued by Med. Faculty Queen's Univ.) says that a survey of the literature seems to show that serious symptoms do not develop in the human subject unless anesthesia has extended over thirty minutes; that such symptoms are more prone to develop in anemic and cachectic patients and those suffering from diseases where

hepatic deficiency may be premised. In dogs, symptoms of poisoning can almost invariably be produced if anesthesia lasts two hours or if the animal is anesthetized several times at short intervals. With ether anesthesia delayed poisoning, while recorded several times, is almost unknown. With such a knowledge the field for chloroform anesthesia becomes narrowed and its limits of safety better defined. There can be no doubt, too, that altogether apart from the serious train of symptoms recorded as characteristic of delayed chloroform poisoning, milder degrees occur and are recovered from. Thus the transient icterus noticed at times after chloroform anesthesia without other evident cause, and such conditions as restlessness, mild delirium, dazing and drowsiness may be instanced as signs of milder intoxications.

A Contribution to the Pathogenesis of Glaucoma.—Tricker (Klin. Monatsbl. f. Augenh.) says that for many years increase of blood pressure has been considered one of the probable causes of glaucoma and has not by any means been entirely displaced by the newer theories. Therefore the increased blood pressure accompanying many diseases of the kidneys and vascular system have been much studied of late. The author has made a careful study of 30 cases of primary glaucoma. Of these 30 cases four were found absolutely normal in hearts, kidneys, lungs and blood-vessels but three had an average blood pressure of 150.

In three more nothing definitely pathological was found beyond a blood pressure averaging 210 which seemed hardly compatible with normal organs. Arteriosclerosis alone was found in 10 cases with an average pressure of 195 and in eight of these the X-ray showed abnormalities of the heart and aorta.

Arteriosclerosis and nephritis of the interstitial type was found in six cases with average pressure of 205. Arteriosclerosis with emphysema and emphysema alone occurred in three cases each with blood pressure averaging 185, while arteriosclerosis with cardiac degeneration occurred once with a pressure of 150. He was much struck with the frequency of arteriosclerosis and in all the cases except four the blood pressure was far above normal. This is, of course, not entirely a novel observation and it would be wrong to assume that it is the sole cause of glaucoma, but diseases of the cardiovascular system certainly prove a part in the genesis of the disease. Therefore in every case of glaucoma, a careful examination should be made and the blood pressure invariably estimated. In most glaucoma cases in which the pressure is high the usual cardiac tonics could only be

harmful, though they might have a place in the occasional cases characterized by low blood pressure.

Ovarian Dyspepsia.—Webb, in The London Practitioner, says there occur among women of from twenty-five to forty-five years of age cases of acute dyspepsia, in which there is no evidence of appendicular trouble, and in some of which an appendicectomy has not even afforded a temporary relief, and with no evidence of previous menstrual disorders. There are generally vomiting, which may be very severe, giddiness, headache, and the facial appearance of suffering from severe eye-strain, although do errors of refraction are found. In some cases there is a great deal of spasmodic backache, not connected with retroversion of the uterus. There is tenderness of one or both iliac fossæ and a great deal of tenderness in the fornix corresponding to the affected ovary. Hot vaginal douches help the condition very considerably, and so does prolonged rest in bed. On assuming the erect posture again, however, and commencing regular house-work, the old trouble at once recommences. In many such cases removal of one or both ovaries has resulted in a complete cessation of these symptoms.

Bacterial Treatment of Acne Vulgaris.

—Ross, in The London Practitioner, had good results from the bacterin treatment of acne vulgaris, 27 cases being treated by him. Of these, 19 patients were cured and eight improved. For the most part, they were treated with stock bacterins, these usually being either the staphylococcus albus or mixed staphylococcus albus and aureus; but the bacillus acnes also was employed, together with the white staphylococcus.

The majority of his cases were of the frankly suppurating type, with long histories and where there was severe facial scarring; and in these the role of the staphylococcus assumes much importance. In all cases in which blackheads were found present or the bacillus acnes could be demonstrated, a stock bacillus acnes vaccine was used in conjunction with staphylococcus albus vaccine. One patient in whom all the lesion conformed to the blackhead type was treated entirely with stock bacillus acnes, and in another instance an autogenous bacterin was used, but with no better results than could be obtained from the stock strains.

The most generally suitable dose is from 5,000,000 to 10,000,000 bacilli. Ross asserts that a tendency to relapse is common in cases of facial acne, but these patients nearly always derive much better from the treatment. If a second or third course is

found necessary, the patients rarely are as bad as when treatment was begun and respond very readily to a smaller number of injections.

Etiology, Diagnosis and Treatment of Cholelithiasis.—Bain (Brit. Med. Jour.) argues that the largely accepted theory of the bacillary origin of gallstones does not apply invariably, pointing, for instance, to typhoid fever, which despite the enormous invasion does not engender the trouble. Among some of the other important contributing factors, he mentions biliary stagnation, digestive disturbances, and mental depression. He is strongly of the opinion that medicinal treatment often may prove curative if the condition is recognized sufficiently early. And this should be the aim of the doctor.

As an aid to prompt diagnosis, this general clinical picture should lead to a closer study, dyspepsia and concomitant intestinal gases, acid eructations, sensation of pressure and weight over the stomach, coated tongue, pain in the epigastrium after food ingestion together with idiosyncrasy against certain kinds, lassitude and somnolency, constant sensation of pressure in the right hypochondrium; besides—and of great diagnostic value, and never absent—sensitivity to digital pressure in the region of the gall bladder.

Treatment, naturally, must be directed against any gastrointestinal faults discovered, especially seeking to improve the digestion, inasmuch as it is now held that, ordinarily under aseptic conditions, concretions in the gall bladder are disintegrated by healthy bile. Obviously, only after restoration of healthy digestion will further medication be in place, among these being the bile salts and hexamethylenamine.

He spoke highly of the laxative mineral waters. That our present irrational mode of living and eating is the real cause of this trouble, is demonstrated, he thinks by the fact that biliary concretions are of extreme rarity in the animal world.

He does not speak of sodium succinate, which so many American physicians have found clinically curative of gallstone disease. Best results are obtained when it is employed in conjunction with boldine and the bile salts, the bowels being kept free with laxative salines.

Biologic Value of Infant Food.—Crookshank (British Journal of Children's Diseases) says that if some statistician will take the trouble to ascertain the relative fertility and maternal efficiency, from the lactiferous point of view, of mothers who were artificially fed themselves, he will find there is a definite correlation between arti-

ficial feeding in infancy and the function of various glands in later life.

Brady finds that the addition of malt and "polycarbo hydrates" to the milk where-with young babies are fed is highly advantageous, and gives him better results than any percentage method of feeding.

There are two malted foods that are pre-eminent useful; the first contains dried milk, with malt, some converted starch and now, I believe, added citrates. The second is a member of a well-known series of foods, and, though professedly compounded for children over six months or so, has been found from experience to be perfectly suitable for much younger infants. It has not, however, the advantage possessed by the food first mentioned of being preparable at a pinch, and in time of illness or summer heat, without fresh cow's milk.

It is not a bad plan, too, for the first fortnight of life, to use the malted milk made with water alone in any case—a small teaspoonful of the powder to the ounce or more. Then when the meconium has been all cleared away and the body-cells have had ten days or so to accustom themselves to the malt and dried milk, fresh milk can be introduced gradually in increasing quantities, by weekly or fortnightly half-ounces, till, at the end of six months, the child is taking nearly or quite undiluted fresh cow's milk, with a not very greatly increased quantum of the added powder.

He likes the use of gelatine. A tiny infant, in times of sickness, will benefit by a few spoonfuls of plain jelly made at home from packet gelatine; and for those a little older the jelly into which good broth sets may be used. Since both these forms of jelly melt at a low temperature, they easily slip down the throat. But milk jelly, highly valuable as it undoubtedly is, does not melt, and has to be swallowed almost as a solid. Any child who can digest cow's milk can, of course, digest both junket and milk-jelly. Nor should either milk or buttermilk be forgotten. Both have their values, and practical acquaintance with the details of whey-making will serve the practitioner in good stead. Incidentally, it may be pointed out that milk which will not make good junket is of indifferent biological value, and to be prohibited, whatever its bacteriological purity or chemical composition.

A Case of Cholecystenterostomy for Obstruction of the Common Bile Duct Due to Multiple Hydatid Disease.—Abbott, in The Australasian Medical Gazette, mentions this interesting case:

Twenty-seven years ago the patient, a

male aged 39 years, suffered from hydatid cyst of the liver, and was operated upon by a leading member of our profession by a method then sometimes adopted, namely, by aspiration of the fluid contents of the cyst. The operation produced an apparent cure. On March 3rd of this year he was sent to my consulting rooms by his medical attendant, who reported that he had been suffering from a great deal of pain in the right upper abdomen, and from jaundice, and that he diagnosed obstruction in the common duct probably due to the presence of gall stones. The patient informed me that he believed he was suffering from hydatid disease, as various members of his family had so suffered, and he also gave me the history of the operation mentioned above. Without operation, it was impossible to determine the exact cause of the obstruction. He was admitted to the Royal Prince Alfred Hospital, under my care, and in addition to the information about the aspiration of the hydatid, gave the following history: He had typhoid fever when a child, and an attack of intestinal obstruction 15 years ago. He believed that the illness present on admission started seven years ago with a chill. On the following day, he had severe abdominal pain passing round to the right side, and accompanied by vomiting. He has had similar attacks during the last seven years, the last four attacks being accompanied by jaundice. The worst attack took place three weeks before admission; the pain was very severe and lasted five days; he was very jaundiced; the stools were pale, and the urine very dark in color. He was always more or less constipated. On admission, his general condition was good, his tongue dirty, no abnormal swelling could be felt in the abdomen, there was no tenderness over the region of the gall bladder, he was very jaundiced.

On March 19th, the abdomen was opened over the region of the gall bladder, and six small dead hydatid cysts were found, filled with a caseo calcareous looking material, buried in dense adhesions, and distributed around the gall bladder and bile ducts. The largest one was intimately associated with the liver and gall bladder. The distribution of the cysts and the extensive and dense nature of the adhesions made it extremely difficult to properly define the anatomical conditions of the parts, and made the operation rather an anxious one, as one had visions of inadvertently injuring the portal vein or other important structures of the region. The cysts were removed in toto, the gall bladder isolated and opened, and an attempt made to pass a probe along the common duct without success. The dense

mass of adhesions increased the difficulties of this attempt. A tube was placed in the gall bladder, which was stitched to the abdominal wall, a second tube with a strip of gauze beside it was inserted into the abdominal cavity, and the wound was closed. It was hoped that perhaps the removal of the hydatids might cure the obstruction, especially as the patient vomited some bile-stained fluid near the close of the operation. At the same time, the possibility of having to perform a cholecystenterostomy later on was fully recognized. After the operation, the amount of bile that escaped through the tube and the nature of the stools showed that all the bile was escaping externally. This condition persisted after the removal of the tubes, and, although the sinus closed once or twice, the closure was for about 24 hours only, and was accompanied by pain and was followed by a very copious flow of bile from the wound.

The patient's general condition improved greatly after the operation, the jaundice disappeared, and the patient said he felt better than he had done for many years; the continued flow of bile, however, made a second operation imperative. The abdomen was again opened, the gall bladder isolated with some difficulty, and a second unsuccessful attempt was made to pass a probe along the common duct. An attempt was then made to display the duodenum, but this, on account of the old extensive inflammatory trouble, was very tightly bound down and could be exposed with safety in but a small portion of its extent so that a satisfactory anastomosis between gall bladder and duodenum was impossible. A loop of jejunum, about 18 in. from its junction with the duodenum, was then drawn into the wound, and the gall bladder anastomosed with the apex of the loop with the aid of two rows of sutures, the inner of catgut and the outer of silk. The line of suture was further strengthened by another row of silk sutures. The ascending and descending limbs of the loop of intestine were then joined by an entero enterostomy, three layers of sutures being used, one of catgut and two of silk. Had the gall bladder approximated more to normal, the abdominal wall would have been closed without drainage, but as the gall bladder had to be dissected out from among adhesions on two occasions, it was feared that its serous surface was in such a condition as to possibly prejudice the proper glueing of the opposed serous surfaces of gall bladder and bowel, and thus lead to some leakage at the line of union. A gauze drain was therefore inserted near to, but not at the line of sutures. The abdominal wound was then closed, except at the site of the drain.

After operation there was a good deal of tension about the situation of the gauze drain, and the patient suffered for over a week from a troublesome cough. These circumstances, with a slight local infection, caused a slight gaping of part of the wound, but there was no leakage from the line of union of gall bladder and intestine. A very slight greenish tinge on the gauze for a few days, I attributed to a slight escape of bile from a portion of the liver substance exposed and injured in isolating the gall bladder and in separating adhesions. From the time of the second operation the bile has passed freely into the bowel, and the wound is now quite healed, except for a minute granulating surface, which ought to be covered by epithelium in a few days.

The author says that this case is an example of multiple hydatids apparently caused by the aspiration of a single cyst, also of how hydatids may sometimes terminate their existence, of the anxiety that may be felt when operating in the regions of the bile ducts when the structures cannot be properly defined, of one of the modes in which hydatids may cause obstruction to the flow of bile, and of the impossibility in some cases of anastomosing the gall bladder to the duodenum. The entero-enterostomy is, I consider, a necessary part of the operation when the jejunum has to be utilized.

Before the first operation, I thought that the patient's attacks, if not due to gall stones, were possibly caused by an old hydatid of the liver discharging small daughter cysts into the bile channels, and so setting up symptoms like those caused by gall stones, for I have met with cases of that description, and no doubt many of you have done the same; but in this case, such was not the condition.

Adrenaline in Post-Anaesthetic Vomiting. Keay (Edinburgh Medical Journal) after describing the measures adopted in cases of vomiting following chloroform anaesthesia states that when the vomit is hæmorrhagic he administers by the mouth, in addition to the other measures, 5 to 10 minims (0.3 to 0.6 c.c.) of solution of adrenaline chloride, in a teaspoonful of water. As regards the rationale of this treatment, he suggests that the blood in the stomach was the result of the engorgement of the stomach vessels during the employment of the Trendelenburg position, which subsequently ruptured under the stress of retching. In those cases where the vomit is black from the commencement of vomiting, he suggests that the stomach has been made anæmic by the Trendelenburg position, and small ulcers have been eaten out

of the mucous membrane by the excessively acid stomach contents. Whatever the explanation, he has found in a series of such cases that, after washing out the stomach contents by saline draughts, the passage of blood into the stomach is arrested by the administration of adrenaline, and the cessation of vomiting has followed with remarkable quickness and success.

The Value of Emetine in Liver Abscess.

—Mallannah (British Medical Journal) mentions a severe case of amebic dysentery occurring in a woman of 40, an alcoholic. The trouble began about a year ago, and since that time the patient had suffered from diarrhœa. About four months ago she began having chills and fever and soon after, on three different occasions, a hepatic abscess was emptied by aspiration. However, the pus continued to collect, and opening of the abscess was suggested; but on account of her weakness the patient declined to submit to the operation.

On March 13th he found the patient extremely debilitated, emaciated, and with marked enlargement of the liver. She complained of severe throbbing in the liver and was unable to lie on the right side. She was having about five liquid stools daily, was unable to sit up or move in bed, suffered from nausea, and was unable to take food.

Emetine in $\frac{1}{4}$ -grain doses now was prescribed, to be given, in solution, thrice daily. Within one week the patient's temperature came down to normal, and remained thus: the diarrhœa stopped and the pain in the hepatic region diminished. The swelling gradually began to grow less, and in a month the liver had returned to its normal size. Appetite returned, the anemia disappeared, the patient began to gain weight, and soon was able to be about. Altogether, the patient received 21 grains of emetine.

He publishes this case, he affirms, to emphasize two facts: first, that emetine is effective in amebic infection even when suppuration already has taken place, and, second, that it acts efficiently when given by the mouth.

Rodent Ulcer Occurring in a Patch of Psoriasis in the Gluteal Cleft.—Gray (British Journal of Dermatology) mentions the case of an unmarried woman, aged 56 years, who gave a history of having suffered from psoriasis since she was 24 years old, which had never completely disappeared, in spite of various kinds of treatment, including arsenic and salicin internally and chrysarobin externally. For ten years she had noticed a lump, which began on the left side of the upper part of the gluteal cleft; and was sore; this had grad.

ually spread until three years ago it ulcerated, became very painful, and discharged freely. She was told that it was "lupus," and X-rays and subsequently radium were applied, but without any relief being obtained.

On examination she had extensive plaques of psoriasis on the trunk, especially in the region underlying the waist-belt, and a few scattered patches on the limbs. In the upper part of the gluteal cleft was an ulcer $1\frac{1}{4}$ inches long, extending laterally for 1 inch on to the left and about $\frac{1}{2}$ inch on to the right buttock. When the buttocks were not separated the ulcer was folded on itself and the right and left halves of the floor lay in contact; separation of the buttocks was very painful. The ulcer was shallow and its floor smooth, and discharged a thin yellowish fluid. Surrounding it was a raised irregular nodular edge, which was very hard, and continuous with the left edge was a psoriasis patch, which extended over the left buttock and on to the skin over the sacrum above the upper margin of the ulcer; the skin adjoining the right edge was apparently normal. No glandular enlargement could be found.

The patient was not a very robust individual but was not cachectic. She had rheumatic valvular disease of the heart of old standing with good compensation, and there was a strong family history of tuberculosis.

As the ulcer appeared to be of malignant nature excision was recommended, and Mr. Raymond Johnson freely excised it and closed the wound by bringing over a flap from the right buttock.

On examining sections taken from the nodular edge the epidermis was found to be intact; the horny layer was irregularly thickened; the interpapillary processes were much elongated and the rete overlying the papillae was also hypertrophied. The cells of the Malpighian layer were normal in appearance, though those of the basal layer were somewhat elongated and there was some edema of the deeper layers of the epidermis. The vessels of the papillae were dilated and in a few places there was an evadate of round-cells into the papillae. The corium was occupied by columns of epithelial cells arranged mostly perpendicularly to the surface; these columns tended to anastomose with each other so as to form irregular patterns in the corium; they were composed of spindle- and polyhedral-cells with little protoplasm and were always surrounded by a well-defined layer of cylindrical cells. There was no sign of cell-nest formation but in some places there was a tendency to cystic degeneration; in some places these columns were continuous with

the deeper layers of the epidermis but they did not extend down into the subcutaneous fat; they were surrounded by rather dense cellular tissue and there was very little exudation of round-cells in the corium; the vessels of the corium were slightly dilated. Sections taken from the base of the ulcer showed similar changes but the epidermis was destroyed and its place taken by granulation tissue. The cell columns, which were here surrounded by cellular infiltration, showed marked degenerative changes.

Miscellaneous.

The Test of a Tonic.

The field and function of a systemic tonic is generally understood and appreciated by both physician and patient. To stimulate, whip or goad the vital processes is not to "tone," but, on the contrary, to ultimately depress. A real tonic is not a mere "pick-me-up," but some agent that adds genuine strength, force and vigor to the organism. The genuine tonic is a builder or reconstructor of both blood and tissue. Any agent which will increase the power of the blood to carry and distribute the life-giving oxygen is a tonic in the best and truest sense of the word. Iron in some form is an ideal tonic, as it builds up the vital red cells of the blood and the hemoglobin which is their essential oxygen-carrying element. Of all forms of iron, none is quite as generally acceptable and readily tolerable and assimilable as Pepto-Mangan (Gude). It creates appetite, tones up the absorbents, builds the blood, and thus is a real tonic and reconstructive of high order. It is especially desirable because of its freedom from irritant properties and because it never causes a constipated habit.

Physicians will do well to write the Dawson Pharmacal Company, Dawson Springs, Ky., for samples of their Iodized Emulsion (Scott) and give them a thorough trial in stomach and bowel troubles. This preparation is being used extensively in the South where the physicians have become acquainted with it, and is being relied upon as nearer a specific in the above than any preparation at their command. It being strictly ethical, the Doctors should give it a trial.

"The experiments of Drs. Charteris and Latham prove that the presence of ortho- and para-Cresotic acids as impurities in artificial salicylic acid cause intense gastric irritation and depression of the heart; furthermore since artificial salicylic acid and its

derivatives are eliminated in the urine they are destructive to the kidneys and should therefore never be employed for internal administration. None of these objections apply to ealcyclic acid from natural sources."

Attention is called to the fact that all the salicylic acid in the Tongaline preparations is made from natural sources.

Creosotonic (Scott) manufactured by the Dawson Pharmed Company, of Dawson Springs, Ky., is gaining quite a reputation among the practitioners as a Creosote product that can be given to a delicate stomach without any fear of derangement of the digestive organs. Many physicians who have used it claim that their patients have received great benefit, and many of them, to all appearances, are well who were pronounced cases of tuberculosis. Manufacturers will gladly send samples to any reputable physicians who would write them for same.

Anedemin Tablets, manufactured by Anedemin Chemical Co., of Chattanooga, Tenn., are being used by physicians with success in dropsical conditions. Anedemin is far superior to digitalis and the prescriptions hitherto in use for rapid removal and permanent relief of dropsical effusions, whether due to cardiac, renal or hepatic diseases. Anedemin is non-toxic, and patients do not have to be watched nor kept recumbent, as in digitalis administration. Anedemin gives relief to many apparently hopeless incurables, victims of mitral regurgitation, Bright's disease and cirrhosis, prolonging many lives. Its action on the heart, liver and kidneys is entirely satisfactory. Dr. Rowe, of Kentucky, states that in dropsical effusions Anedemin gives quick results, removing the water quickly and dropsy seldom returns when Anedemin is used for a sufficient time. Anedemin Chemical Co. are very liberal in sending samples to all who are interested in their remedy and are very conservative in making extravagant claims, though Anedemin deserves considerable credit among other remedies and is well worth notice by all physicians who come in contact with dropsy. —From Louisville Medical Journal, March issue, 1913.

"There is a decided tendency to limit evidence of rheumatism to uric acid conditions in joints, fibrous structures, voluntary muscles and cardiac membranes. But the uric acid state probably acts upon the most susceptible part of the organism and hence it may affect perceptibly almost any tissue or part of the body, most prominently joints,

ligaments, muscles, skin, throat, teeth, eyes, ears, urethra, intestines, the serous membranes generally, the excretory mucosae and the nervous system."

It will thus be seen that Tongaline is indicated in many diseases for which it is not always used, as there is no more reliable remedy for the prompt and thorough elimination of uric acid.

Armour Gets Gold Medal.

The International Congress of Medicine held at the University of London gave the gold medal, the only award in this class, for Digestive Ferments to Armour and Company, Chicago. This is another high acknowledgment of the pre-eminent quality of Armour's Pepsin and Pancreatin.

Superiority in Armour's Pepsin and Pancreatin is easily explained. An abundance of raw material, proximity to abattoirs, experts in the manufacturing departments and independent analysts to test the finished preparations make a combination that furnishes products which appeal to those demanding the best.

Ampoule Medication.

A great convenience has been placed at the physician's command in carefully prepared sterile solutions of various drugs for hypodermatic use in ampoules. Lilly Ampoules embrace a wide variety of medicinal agents and in many respects they are superior to and more convenient than hypodermatic tablets.

A highly desirable feature of the Lilly Ampoule is the flat bottom. The ampoule will remain in an upright position. The label is only tipped on so that the solution is at all times in full view. Ampoules, Lilly, are packed in boxes of a dozen, but for the sake of convenience each one is individually labeled and wrapped in a strong paper tube, enabling the physician to carry one or more in the pocket or surgical bag without danger of breakage. The neck of each ampoule is carefully scratched with a file so that slight pressure will cause an even break.

In addition to the ampoules containing solutions for hypodermatic use, special ampoules are prepared for other emergency requirements, for example, Spirit of Ammonia Aromatic, Chloroform in dropper ampoules and Ammonia Water Stronger.

A post card addressed to the Lilly Company will bring literature and further information.

A Practical Detail in Connection with the Wassermann Reaction

It has been definitely proven that failure to obtain a positive reaction from the Was-

sermann test is due not infrequently to encasement of the spirochæta by the tissues. Clinical investigations have shown the wisdom, therefore after a negative Wassermann, of administering iodine for two or three weeks and then repeating the test. If the spirochæta are present but encased in the tissues, the iodine will dissolve them from their protective surroundings and throw them out into the blood stream.

Because of the foregoing, many competent observers are making it a routine practice—if a first Wassermann test is negative—to administer Burnham's Soluble Iodine 10 to 20 minims in a half glass of water three times a day for two weeks, and then repeat the test, before giving a final opinion.

Incidentally this property of releasing the syphilitic organisms from the tissues, emphasizes the great value of iodine in the treatment of secondary or tertiary syphilis. Without this action of iodine neither mercury nor any other powerful remedy can get to the germs to destroy them.

Burnham's Soluble Iodine is undoubtedly the most serviceable iodine preparation in these cases owing to its rapid absorption, notable physiologic activity, and gratifying freedom from all disagreeable or injurious effect on the stomach or intestinal tract.

For valuable data on the use of iodine, address

BURNHAM SOLUBLE IODINE CO.,
Auburndale, Mass.

Chetwood, of the New York Polyclinic Hospital, in his new work on Urology, p. 781, says, regarding the use of salvarsan in syphilis: "One dose of salvarsan has demonstrated indisputably its influence in overcoming and controlling the symptoms during most active early stage, and of causing a cessation thereof for periods of varying duration. A single dose has demonstrated its ability to remove promptly the obstinate chronic lesions upon the skin and mucous membranes, and to cause enlargements of the organs and the bones to disappear in a short period. It may, therefore, be reasonably stated that one dose of salvarsan is the equivalent of several months of mercurial treatment."

Chetwood, of the New York Polyclinic Hospital, says that "an adequate course of salvarsan therapy is essential, following the initial dose, to complete the work that has been begun, and to effect the destruction of all the remaining active organisms."

Discussing the use of neosalvarsan, C. H. Chetwood, of the New York Polyclinic Medical School, says "it is important to distinguish, if possible, between the reac-

tion of the medication, and the increased activity of the invading parasites of the disease. In one instance increased dosage and renewed attack are demanded, in the other are interruption of the treatment, until the irritating influence of the chemical agent upon the system has subsided." In ordinary case Chetwood advises repetition of small doses over very few days or full dose every week "until an aggregate of from 2 5 to 4 grams have been employed in a period of from three to six weeks."

"Children of 7 years and upwards may be given 0.3 gram salvarsan and 0.5 gram neosalvarsan, and the same proportion to the adult dosage followed with respect to the total amount."—Chetwood; Practice of Urology, p. 794.

"Lawyers and Phisitians."

This is the quaint title of an essay by a writer who signs himself "X." Montaigne is quoted as follows: "'Ferdinando, kinge of Spaine, sending certaine colonies into the Indies, provided wisely that no lawyers . . . should be carried thither, judging with Plato that lawyers and phisitians are an ill provision for any countrey.' Whence it would appear that, since 'Ferdinando, kinge of Spaine' did not prohibit the conveyance of physicians to his new colonies, he was of opinion that lawyers were the greater of the two ills." On the other hand, Cabbett believed that the lawyer "in defending the property of the feeble or the incautious against the attacks of the strong and the wiles of the crafty; in affording protection to innocence, and securing punishment to guilt; has in the affairs of men and on their condition in life a much more extensive and more powerful influence than can arise from the application of surgical or medical knowledge." The quotations serve as an introduction to the remarks by the author on the subject that has recently been enjoying the attention of a committee of the House of Commons, namely, the sale of patent medicines. It is urged that whereas physicians should demand a fitting reward for their services, they should temper this demand with discretion. "Perhaps it is because our daily task is with mankind in the moments of weakness that we are apt to realize the dependence of others upon us more vividly than we do the limitations of our functions and powers in relation to the outside world. In the sick room we are paramount. Discussion there has no place and the just assertion of authority is becoming. But, when our rights and privileges, as we conceive them, come into conflict with those of others, the mantle of mere authority that we sometimes assume falls

from us." It is pointed out that all will agree that the sale of articles devised to further the commission of criminal offences and that the sale of articles by means of fraudulent pretences should be penalized. "But if we invoke the interference of the State to restrict the sale of gray powder and iron pills or aloetic aperients merely because certain manufacturers give their preparations attractive names and sell them more cheaply than a doctor can dispense them, we must, as a lawyer would say, show cause." Except in rare instances people do not take patent medicines when seriously ill and are quicker to detect arrant imposture than one imagines. Not all the claims put forward by the vendors of proprietary articles are extravagant. "If we are to set up arbitrary standards and condemn as quackery everything we can't explain (coming from unorthodox sources, *bien entendu*), we run two grave risks. We run the risk of discredit with the public when we have to revise our standards in the light of fresh knowledge; and we run the risk of having, in the alternative, as the lawyers say, to perpetuate, Chinese fashion, a face saving orthodoxy." Oae "may be tempted to forget that there is often some truth in heresy and error in orthodoxy."—The Universal Medical Record.

Treatment of Acute Iritis.

In the treatment of acute iritis, N. Bishop Harman writes that atropine should be administered as a first step to fold back the iris and dilate the pupil. He recommends that an ointment of the atropine sulphate combined with cocaine hydrochloride, 2 per cent. each in equal parts of lanolin and petrolatum be prepared and a small piece placed below the lower lid every hour for the first four hours, and then every two hours until the pupil is widely dilated. Later the strength and frequency of the application may be reduced to 1 per cent. night and morning. The author also recommends the applications of relays of hot fomentations to reduce the pain. In the worst cases, the region of the eye may be blanched by withdrawing blood by leeches applied to the outer canthus in order to hasten the action of the atropine. The severity of the pain may be checked temporarily, at least, by instilling a 5 per cent. solution of dionin.

For indirect treatment, it is well to give a purge at the outset. The subjects of iritis nearly always have a foul breath, and are constipated. Any drug that will give a free and watery stool will do, and to aid this, plenty of water should be given with and after the draught. Absolute rest in bed in a dark room should be insisted upon,

and alcohol and tobacco made taboo. In any case of which the origin is indeterminate or pending its determination, an alternative is useful, and there is nothing better than mercury iodide—5 grm. of potassium iodide with a dram of the liquor of perchloride of mercury. If the case be syphilitic, it is first rate treatment: if it be due to gonorrheal rheumatism, it is good—better than vaccine treatment; only if there be arthritis at the time, salicylates or aceto-salicylic acid are better.—The London Lancet.

Treatment of Perforated Gastric Ulcer.

While the best local treatment for a perforated gastric or duodenal ulcer is to close it by suture, and the abdomen with drainage, there can be no doubt that one of the first difficulties which a surgeon meets in these cases is to close the ulcer soundly and satisfactorily. The reason is that the stitches cut through the sodden, swollen tissues in which they have to be inserted to close the perforation. One cannot but surmise that many perforations deemed to be closed satisfactorily at the operation are not so an hour or two later. In spite of this, patients who have been operated upon continue to recover. Hence there is a justifiable suspicion that cases of perforated gastric or duodenal ulcer can recover when the perforation is not closed, or at least imperfectly closed.

Since 1908 the author has used the principle of isolating, but not closing, the ulcer on 15 occasions, including one perforation on the posterior abdominal wall. In two of these the end of a gauze plug was held by a cat-gut stitch in the aperture of the perforation. These patients have done uniformly well. As a rule, the longer the time spent in suturing the perforation, the greater the insecurity of the closure. Isolation of the perforation by tamponade has the advantage of being simple and of saving valuable time. No patient on whom it was done ever needed a primary or a secondary gastroenterostomy. No patient had a gastric fistula or has in any way, as by delayed convalescence, showed signs of non-closure of the ulcer. When the perforation is not sutured the end of a gauze drain is always placed next the ulcer, and brought out of the wound. This drain is removed in about thirty-six hours under anaesthesia with nitrous oxide gas and not replaced. After operation the patient is placed in the Fowler position, saline solution is administered rectally and continuously, and nothing but water is given by the mouth for three days. Recently it has been the author's practice to enclose the isolating tampon of gauze in

a longitudinally split rubber tube, a cigarette drain, part of which is left in position after the removal of the gauze.

Having shown the practicability of the successful isolation of a perforation with a gauze tampon, the author suggests that at first an attempt be made to close the perforation by suture. If this fails or appears to afford a doubtful closure of the perforation, no further time should be spent on it, but the ulcer be plugged and drained. The author believes that the isolation of these ulcers by tampon will become the first and most popular line of treatment except in cases operated upon very early after perforation.—Crane, in *The London Lancet*.

The Pathogenesis of Mercurial Stomatitis and Colitis.

Almkvist (*Dermatologische Zeitschrift*) in a long series of clinical and experimental observations, provides additional proofs of his original explanation of this important toxic action of mercury, and replies to the criticisms of other writers in a very convincing manner. According to him putrefactive processes in the mouth, dependent mainly on pyorrhea, cause erosion and a loose, congested condition of the mucous membrane, in the meshes of which H_2S is generated and freely absorbed. The capillaries which supply the mouth are charged with mercury, which, meeting in this situation with the H_2S , will be converted into the sulphide; this is deposited in the tissues and capillary walls as a black precipitate, which can be demonstrated microscopically and chemically. Mercury sulphide is very toxic, as he has experimentally shown, and the damage done to the vascular system locally can therefore readily be accounted for. Further erosion leading to ulceration is the result, and if there is much circulatory disturbance the organisms which abound in this cavity of the body become so virulent and the body resistance so weak that even gangrene may ensue.

To Sabbatani's suggestion that the local selective action of mercury on the mouth is due to the ionic concentration of Hg in the saliva owing to the low protein and high chloride content of the latter, the author returns what would seem to be an unanswerable reply—namely, that mercury and iodiform locally applied have not only prevented but have actually cured mercurial stomatitis, and that such has been for quite a long time the chief therapeutic measure used in the St. Goran Hospital in such cases. The colitis is explained in much the same way, and it is noteworthy that in animals such as dogs, in which the intestinal putrefactive processes are not marked, colic and diarrhea with watery and blood-

stained stools are exceedingly difficult to produce.—*British Medical Journal*.

Malaria Treated with Salvarsan.

Memmi and Cantieri in *Riv. Crit. Clin. Med.*, give a very careful and full account of ten cases of malaria which they treated with intramuscular injections of "606." Eight of the cases were aestivo-autumnal malaria and two were benign tertian; six were relapses (one benign tertian and five aestivo-autumnal). Three were primary infections and one doubtful; one of these was benign tertian.

The injections of "606" were made either during the period of apyrexia or during fever, at the height or fall, and no inconvenience whatever was produced. Each had a single dose of from 0.3 to 0.6 gm.

Their conclusions regarding the action of the drug in these cases are as follows:

- (1) It was insufficient to check the attack of fever in nearly all the cases and it did not prevent relapses.
- (2) It did not show any parasitocidal action in malaria.
- (3) The general condition of the patients did not benefit to any extent under the treatment.
- (4) The injection of "606" did not give good results in their cases even when small doses of quinine (0.5 grammes) were given in addition.—*Tropical Diseases Bulletin*.

X-Ray Treatment of Suppurating Tuberculous Glands.

Cumberbatch reports the case of a girl, aged 16, in whom there had appeared five years previously enlarged glands in the neck. A year later they were much larger and had commenced to suppurate, and sinuses formed. They were first treated with fomentations, ointment and other local applications. X-ray treatment was commenced in May, 1911. Improvement set in at once and no more glands became enlarged, and no fresh sinuses formed. The discharge also lessened and the swellings became smaller. In October, 1911, the improvement was steadily progressing, the neck getting smaller in circumference; the glands were less palpable and the sinuses had closed. The patient received the last application in July, 1912; her weight had increased, and she now looked healthy. The neck was not swollen, no glands were palpable, the sinuses had closed, and there were left only a few scars on the skin marking the site of the former abscesses. The dose of x-rays had averaged $\frac{1}{4}$ pastille (Sabouraud B) per week on each side of the neck. The author felt justified in saying that this great improvement was the

result of the irradiation; he noted the diminution in size of the neck dose by dose. —Proceedings of the Royal Society of Medicine.

Neuritis.

In employing electricity systematically for diagnostic purposes in neuritis, the author was led to the conclusion that the neuromuscular abnormality in this condition is never localized, but tends essentially to spread. Even lesions clearly peripheral in origin and unilateral always become bilateral, and the nerve-centers, especially the cord, are regularly implicated.

In view of these conditions, the author departed from the usual method of applying the galvanic current in these cases, and began to employ a more diffuse treatment with low intensity of current per unit of area. The electrodes, consisting of absorbent cotton wrapped with gauze, and 3 or four centimeters thick, are made into long bands, according to the extent of the parts to be exposed. An electrode as long as 120 centimeters (4 feet) is used for the lower limbs. These electrodes are placed paralld in pairs along the limbs or the spinal column, and receive the current throughout metallic bands of appropriate length. Their surfaces vary from 600 to 2000 square centimeters, and the intensity of current employed easily attains 60 to 80 milliamperes for one arm and 100 to 125 milliamperes for one lower extremity. Generally the two lower limbs are simultaneously treated, and the combined intensity may be carried as high as 300 milliamperes. The density of current per unit of surfaces remains low, however,—0.1 to 0.2 milliampere at the most. The sittings, which are readily borne by the patient, can be made to last three-quarters to one hour, and be frequently repeated. The current is propagated transversely to the axis of the nerves, and not longitudinally as in the procedure hitherto generally carried out.

In nearly 600 cases of neuritis, of all grades of severity, thus treated by the author in the last five years, complete recovery, verified by electrodiagnosis, was regularly obtained where the patients could devote sufficient time to the treatment. Even certain forms of myelitis—traumatic in particular—were considerably benefited by the treatment.—Hirtz in *The Academic des Sciences*, Paris.

Augmentation of Systemic Resistance to Infections.

Clinical experience seems to show quite clearly that certain infections may be reduced in severity by the administration of

Ecthol (Battle). Thus in erysipelas and furunculosis, to select two infections which have responded to the internal use of Ecthol, it has been found that Ecthol exerted an influence on the process of a most beneficial nature, which probably is best explained by assigning to Ecthol the positive power of increasing the phagocytic action of the blood stream. Typhoid fever and small-pox are also diseases which indicate the employment of Ecthol.

The Palld School Girl.

In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general breakdown of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anemic, nervous and more or less devitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto Mangan (Gude) is just the hematonic needed, as it acts promptly to increase the red cells and hemoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

A Familiar Form of Cystitis.

There is a form of cystitis quite familiar to the general practitioner. It occurs in females, old and young, with apparently normal pelvic organs, generally after a chilling. There is an abrupt onset with frequent micturition, tenesmus, and perhaps dysuria. The acid urine contains the infecting organism, usually a colon bacillus, pus, and often blood. Rest in bed, local warmth, light diet, free catharsis and sanmetto are the measures employed, and in a few days the severity of the attack subsides, and generally in two or three weeks the patients are as well as ever.

Safe Antiseptics In Gonorrhea.

Tincture of iodine irrigations in solution of from one to four drachms to a quart of hot water is said to be one of the safest and best antiseptics that can be used in gonorrhea. The strength of the solution and number of irrigations a day depends upon the stage of the disease. To keep the urine bland and non irritating sanmetto should be administered in teaspoonful doses three or four times daily throughout the treatment. In cases of extreme acidity of the urine one of the potassium salts will be found helpful.

Prevention of Posterior Urethritis.

It is said that the salicylate of sodium, though of comparatively little value in the inflammation of the anterior urethra, exerts a beneficial effect in posterior urethritis. Under its influence the urine rapidly clears, and the acute distressing symptoms disappear. It is upon the theory that this drug renders the urine markedly acid, and thereby helps in preventing the extension of the inflammation to the bladder and the production of cystitis. Apart from the administration of salicylate of sodium, the treatment must also be directed to combating the prominent symptoms of acute posterior urethritis, vesical tenesmus, terminal hemorrhage, etc. Sanmetto should be given, and the use of the hot sitz bath prescribed. Should the distress be very great, small doses of morphine may be administered.

Acute Prostatitis. Sanmetto.

In the treatment of acute prostatitis salicylic acid internally in five-grain doses, and sanmetto in teaspoonful doses tends to diminish the source of infection, reduce the existing inflammation, and encourage resolution. The sanmetto being a mild, soothing resolvent diuretic also tends to allay the suffering of patient. If the urine is acid citrate of potassium in ten-grain doses will aid in relieving irritation and tenesmus. As further measures for reducing inflammation, light diet, absolute rest in bed, free movement of the bowels, and local application of heat by means of sitz baths, or hot water bag, should be enjoined. If the sanmetto is kept up urinary retention is not likely to supervene, unless there is a previously hypertrophied prostate; in that case the bladder should be emptied by a soft catheter at intervals, still keeping up the use of sanmetto. The prostate should not be massaged during the inflammatory state, but during the period of resolution massage will aid the process.

Artificial Pneumothorax in Phthisis.

A summary of the clinical results in Forlanini's method of healing pulmonary tuberculosis by artificial pneumothorax is given by Rerp and Le Bourdelles (*Gaz. des Hop.*). They divide the results into those which are immediate and those more remote. The former are in proportion to the degree of compression of the lung that can be obtained. The expectoration of persons with cavities is at first increased, being doubled or trebled for two or three days after each injection, but when the lung is markedly compressed it later diminishes and disappears altogether, together with the bacillus. The fever, night sweats, and digestive trou-

bles are all favorably influenced, and the liability to hemorrhage is supposed to be lessened. It might be thought that dyspnoea would ensue, but this is not the case, and indeed patients upon whom the procedure has been carried out appear actually to be relieved. This is in accordance with the experiments of Bernard, Le Play, and Mantoux, who have shown that animals possess such a superabundance of pulmonary tissue that a reduction of the lung surface to one sixth of the normal is quite compatible with life. With regard to the duration of the treatment the writers recommend, as a general rule, two years of compression of the lung, after which decompression is effected and the function of the lung is restored, as can be made out by the stethoscope. With regard to permanent results the treatment is so new that there are few statistics to be had. Saugman and Hauser report 33 cases of more than eight months' duration under treatment; of these, nine cases had to be stopped because the cure was interrupted by adhesions, or because a bilateral condition was present; of the remaining 24, eight quitted hospital greatly improved, and one was decompressed and regarded as cured.—*Edinburgh Medical Journal*.

The Pfannenstiel Incision.—Holst (*Munch. med. Wochensh.*) is convinced of the value of the transverse fascial incision of Pfannenstiel in abdominal surgery. Up to the close of 1911 he employed this method in 450 cases. Of these 250 were later examined and it was found that hernia occurred in none of those healing by primary union and in only 1 per cent. of those healing by granulation. Such a result had not been previously obtained with any other method of opening the abdomen. The objection made against this method, that it does not permit of a good view of the field of operation, was not found to be justified; in fact, the contrary obtained. It was found possible to remove tumors as large as a man's head without any special difficulty. One of the important advantages is that the intestines are not likely to protrude, and therefore are not exposed to drying, cooling or contact. In closing the abdominal incision the peritoneum is united with a running suture of iodine catgut and the recti with iodine catgut button sutures, while the external wound is closed with thin silk button sutures. This method permits the patient to get up early after operation, usually on the fourth day.

Death After Neosalvarsan.

Darier (*Bull. de la Soc. Franc. de Derm. et Syph.*), records two cases which occurred

in young men aged respectively thirty-one and twenty eight. The first was suffering from tertiary tuberculo- verrucose manifestations on upper extremities, but otherwise was in robust health; the other was a weakly individual in the secondary stage, with pronounced pulmonary tuberculosis and albuminuria. Both cases had already received courses of mercurial injections. The neosalvarsan was given intravenously to both patients, according to Ehrlich's directions. The first case received on September 25 0.6 gramme, and on September 26 0.75 gramme, without toxic manifestations. On October 2 a third injection of 0.9 gramme was given, and on Oct 6, sixty-seven hours after the last injection, he died in convulsions, with a temperature of 103° F. The other patient, after receiving successively on September 28, October 2 and 5 0.45, 0.75, and 0.9, gramme of the drug, died in a similar manner on October 14, nine days after the last injection.

In a lengthy survey and discussion of these two cases and six others of a similar kind the author comes to the following important conclusions: (1) Neosalvarsan would appear to be more dangerous than salvarsan. (2) Neosalvarsan can produce very serious nervous symptoms, notably encephalomyelitis and progressive neuritis of an arsenical type. (3) Exceptionally it may cause death with symptoms of acute arsenical poisoning. (4) These catastrophes are caused apparently by retention of the drug, due to inefficient or slow elimination, and at the present moment we have no criterion which can certainly enable us to prevent occasional accidents. It is obviously impossible to refuse administration to every case in which there would appear to be lesions of the kidney or liver. His advice is to begin treatment with small doses (a minimum of 0.2 or 0.3 gramme at first), and to increase the dosage by reasonable amounts, with minimal intervals of five or seven days, and to be sure that the preceding injection was not followed by any symptoms of intolerance; also to ascertain that the urinary excretion of arsenic is proceeding normally.—British Medical Journal.

Salvarsan Treatment.

The risk to life from salvarsan is extremely small; but it is useless to deny that there has been, and probably still is, a very slight risk to life. Deaths group themselves under four headings: (1) those with symptoms of meningitis; (2) those with symptoms of nephritis and uremia; (3) those with toxic symptoms associated with degenerative processes occurring in the liver; and (4) those with symptoms of

pulmonary embolism. In the majority of the few fatal cases recorded the symptoms commence only after the second or a subsequent dose of salvarsan. Some patients appear to be exceptionally susceptible to salvarsan, and probably the deaths occurring under the first three headings are generally the result of a cumulative action of the drug, the second injection being administered before the elimination of the first has been completed.

Short of death, complications most likely to cause grave anxiety are those produced by the toxic action of the drug on the body in general (and particularly on the meninges and kidneys), and by phlebitis and thrombosis in the vein which has received the injection. Among 500 cases which the author has treated 5 gave cause for anxiety. Symptoms occasionally met with, but not of sufficient severity to cause anxiety, were rise of temperature, vomiting, rigors, headache, phlebitis, thrombosis, diarrhoea, colic, jaundice (once) cardiac symptoms (once in a case of aortic regurgitation), conjunctivitis, herpes (once), slight transient albuminuria (3 times), and pain in the epigastrium, back, abdomen, or limbs. That salvarsan treatment involves a danger of blindness seems absolutely without foundation.

Precautions to be Taken to Avoid Complications.—The blood pressure of the patient should be lowered so that the vascular system may be enabled, without effort, to accommodate the additional 400 or 500 c.c. of fluid. The author's routine is to administer a pill the night before and a brisk saline purge on the morning of the injection. No food or drink whatever is permitted for five hours before the injection.

The solution should be prepared immediately before use. If during the injection of the salvarsan solution any local swelling develops at the site of injection or the flow the clip should be at once applied to the tubing, the needle removed, and hot fomentations applied to the area.

The patient is kept in bed for twenty-four hours and then allowed to get up, provided the temperature is normal, the site of the injection free from all phlebitis, and no albumin in the urine. If there is any temperature the patient is advised to remain in bed until the temperature has been normal for twenty-four hours. Alcohol is forbidden for a week after the injection. The patient is encouraged to drink large quantities of barley water for forty-eight hours, and only a milk diet is permitted for the first twenty-four hours.

The interval between the injections should not be shorter than one week. If a patient shows any symptoms of intoler-

ance the author advises a mouth's interval between injections. He uses a Marsh apparatus and some filter paper soaked in silver nitrate to make a rough guess at the amount of arsenic that is being eliminated. It is advisable that the second dose be not given while arsenic is present in the urine.

The slight risk of serious complications or sequelæ from salvarsan is more than counterbalanced by the therapeutic results obtained. All sufferers from syphilis, in whatever stage, and all cases of parasyphilis should as a matter of routine be permitted the advantage of salvarsan treatment, Bably in the—London Lancet.

The Treatment of Arthritic Rheumatism.

P. Junghans is of opinion that the treatment of rheumatic affections with antipyretics has been disappointing (Deut. med. Woch.) He finds that salicylic acid is not a specific remedy, and that the most it can do is to reduce fever, relieve pain, and diminish the joint swelling. Menzer has found that better results can be obtained without salicylates by local and general application of warmth. The author has therefore treated a number of rheumatic cases without salicylates. He placed the affected joint at rest, usually by means of a splint. The joint was painted with ichthyol and well packed with many layers of wool. In 21 out of 45 cases this alone effected a complete cure. In those cases in which this more or less expectative procedure did not suffice he applied either local heat or Bier's hyperemia. In 24 cases he found that an active method of treatment was required. The high price of Menzer's antistreptococcic serum formed a bar to its general use. He therefore turned his attention to collargol in those cases in which salicylates proved useless. He preferred giving intravenous injections to applying per rectum, partly because the action is more rapid, and partly because it is easier both for the practitioner and for the patient. The dose employed was 2 c.c.m of a 5 per cent. solution. Rectal application, however, yielded excellent results. He was able to observe a rapid and permanent cure in the majority of his cases; severe recurrences were scarcely met with, and the heart remained free from gross lesions. In those cases in which a cardiac affection was already present the condition of the heart tended to improve, or at all events not to get worse. He recommends this form of treatment for all cases of rheumatism.—British Medical Journal.

H. C. Camerson (Proc. Roy. Soc. of Medicine) records the case of a woman,

aged 36, whose health first began to fail definitely about seven years ago. About three years ago cyanosis was first noticed and has been present ever since, varying in degree: She complained of weakness, dyspnoea on exertion, and constipation. After the birth of four healthy children she has had seven miscarriages at short intervals. There is no abnormality of heart or lungs. The cyanosis shows most plainly in the face, lips, mouth, feet and hands. There is no appearance of pallor associated with the cyanosis. Her fingers are not clubbed. The tongue has been coated, and the breath foul. There is much pyorrhoea alveolaris, with spongy, hypertrophic gums, from which a growth of streptococci has been cultivated. The blood count showed 5,350,000 red cells, 9,375 white cells, and 90 per cent. haemoglobin. The spleen is not enlarged. Spectroscopic examination of the blood shows no abnormal pigment. The patient denies having taken any drugs, except those prescribed by her doctors.

Forsyth (Proc Royal Soc. of Medicine), records the case of a boy aged 10 years, the sixth of eight children, his birth being preceded by two miscarriages. He was pigeon breasted. Right chest showed defective lateral expansion, with impaired percussion, but from first to fourth interspaces, over the area of the heart sounds, vocal fremitus and vocal resonance are absent. Behind, the note is impaired opposite the first dorsal spine, becomes duller at the second, and resonant again at the fourth; heart sounds from first to eighth spine rather faint and high-pitched; vocal fremitus and vocal resonance are diminished. The left lung and heart are normal. X-ray examinations shows a mass about the hilum of the lung, which did not displace the heart. The boy had no cough, no sputum, but a slightly irregular temperature. The Wassermann reaction was positive. Eutrogenous Cyanosis.

Summer Diarrhoea in Children.—Camerson before the Section of Diseases of Children of the Royal Society of Medicine, London, held recently, concluded that neither direct overheating of the child, nor disturbance of the digestion, nor intercurrent digestive disorders, nor direct infection of the alimentary tract were sufficient of themselves to explain the rise in the mortality from diarrhea in summer, but that each played a part; that of all the deaths registered as due to diarrhea in the summer, a small fraction only was due to bacterial infection of the alimentary tract; that the

progress of knowledge with regard to the prevention and treatment of diarrhea had not been a little hindered by regarding the problem from a standpoint too purely epidemiological.

Laryngitis.

The following procedure is employed by the author: There is placed on the patient places himself, on the tongue 0.3 to 0.4 Gm. (5 to 6½ grains) of an absolutely dry powder of orthoform or anæsthesin. A few movements of deglutition, performed without previous admixture of saliva with the powder, cause the latter to descend to the level of the epiglottis and arytenoepiglottidean folds. On its way it contact with the infiltrated areas or ulcerations covering the entrance to the larynx, and in a few minutes the patient is able to swallow without distress. Where the ulcers are in the interior of the larynx, however, the measure is not so effectual. The dose referred to can be repeated three or four times daily for several weeks without any inconvenience. The procedure is also recommended for cases of quinsy and after operations on the tonsils.—Hinsberg, *Journal de medecine et de chirurgie pratiques*.

Nevi.

Complete eradication of vascular nevi, without any scarring whether, is claimed for radium by the author. He advises that the skin be first broken over the lesion, even if it be only by the lightest application of electrolysis, as this permits of a more rapid action of the radium salt, and its use in relatively small dosage. Since the vascularization in those blemishes varies, and is not the same in different portions of the same lesion, he applies radium varnishes or radium salts in tubes corresponding in strength with the redness of the regions treated. Burns and scars otherwise possible are thus avoided. Foveau de Courmelles *Journal d'hygiene*.

Newborn.

Even when they breathe, newborn infants are often partially choked up, and remain bluish, with stertorous breathing, sometimes for a few hours,—sometimes for days,—before they finally clear themselves. Sometimes, again, they do not succeed in getting rid of the mucus, and then, after a longer or shorter illness, they die of the strain due to partial suffocation, pneumonia, etc.

At the London Hospitals, in 75 per cent. of all full-time newborn infants dying within forty-eight hours of birth, the trachea has been found post mortem to be wholly or partly blocked with mucus. As the

best means of overcoming this danger, the author advises the employment of a simple but effective extractor, made of glass and rubber, already in use at the Coombe Hospital, Dublin. As an improvement to the instrument he recommends that a rubber bulb be attached to it to supply the negative pressure required for suction. The bulb being deflated, and the eye of the extractor being placed over or near the vocal cords, mucus would then be sucked up by the expanding bulb, the process being repeated as often as is necessary. The author is confident that, were the use of instruments of this kind to become general, many lives would be saved. Oxenham, in *Australasian Medical Gazette*.

High Blood Pressure.

Edecombe presents the following summary of his experiences: The measurement of blood-pressure by the mercurial manometer is, on the whole, reliable, and furnishes a useful clinical guide. There is a condition of "functional" or "neurotic" high blood-pressure not due to arteriosclerosis and distinguishable from hyperpiesis. In the majority of cases of "functional" high blood-pressure, direct treatment is unnecessary and may be harmful. "Functional" high blood-pressure does not readily lead to arteriosclerosis. The significance of high blood-pressure as a symptom is less serious than is usually supposed. The treatment of early cases of hyperpiesis is imperative and is usually satisfactory. Spatreatment gives the best results. The treatment of developed arteriosclerosis is unsatisfactory and should be mainly by general measures and periodic spa treatment may be harmful as liable to accelerate cardiac defeat. The prognosis is cases of high blood-pressure is less gloomy than usually considered.—Proceedings of the Royal Society of Medicine.

Fixation.

The procedure referred to by the author consists in injecting into the cellular tissue 15 minims (1 c.c.) of spirit of turpentine. The areas of choice for the injection are the side of the thigh, the lumbar region, or the deltoid region. Prompt appearance of evidences of pronounced inflammation at the point of injection is a good sign, and a seeming tendency toward the development of a widespread phlegmon may be looked on with complete equanimity. In fact, the phenomena of the original infection disappear precisely at this time.

Where there is little or no reaction after twenty-four hours, another injection may be given in a different area. As a rule, a

fixation abscess attains its maximal development on the fifth or sixth day after injection. Provided the procedure has been carried out aseptically, the resulting pus is sterile, and early incision is unnecessary. Absence or weakness of the reaction indicates insufficiency of the body's mechanism of defense, and implies an unfavorable termination. Carles in the *Journal de medecine de Bordeaux*,

Gastric Cancer.

In any case of gastric cancer with grave anemia the presence of pains and tenderness of the bones should always arouse suspicion of carcinoma of the bone-marrow. If the blood on examination shows characters suggestive of pernicious anemia, but with an excess of erythroblasts and myelocytes, the diagnosis of metastases in the bone-marrow is highly probable. The authors report a case which seemed to show that even in the absence of evidence of a myeloid reaction, if there be any suspicion of carcinoma of the stomach, high-grade anemia, with high-color index and megaloctytosis, taken along with the presence of bone-pains, renders the diagnosis of bone-metastases almost certain. Harrington and Kennedy in the *London Lancet*.

Angio-Lupoid.

Under this name Brocq and Pantrier (*Ann. de dermat. et de syph.*, January 1913) describes a rare affection of the skin, of which they have seen, in recent years, six instances. The lesions are very uniform in aspect, in situation and evolutions. It seems only to attack women and those about the age of forty. So far, no examples have been met with in men. The disease occurs in patches, and one is found situated on the side of the nose near the angle of the eye. Less often the tip of the nose may be attacked, or the cheeks on their inner and upper parts. The patches may be almost flat, or markedly raised, presenting a rounded or oval contour, with a well-defined margin. The colour is a purplish-red, sometimes mottled with yellow. When pressed the erythema disappears, and the yellowish tint predominates. The epidermis is quite smooth and thinned, showing no trace of scale or cicatricial atrophy. A well-marked network of telangiectases shines through. To the touch an impression of a soft infiltration is imparted. There are but few patches, one or two as a rule, seldom four or five. These may attain a diameter of nearly an inch by half an inch at their smallest. They develop slowly, in course of months or years, show no tendency to spontaneous involution, and are very resistant to treatment. The ailment seems special

in its nature. One may eliminate tuberculosis lupus. The diffuse yellow-brown tint evoked by the pressure of the diascopos is quite distinct from the barley-sugar hue of small isolated lupus tubercles, though the softness of the infiltration recalls that of lupus. In the same way lupus erythematosus can be excluded. There is neither desquamation nor cicatricial destruction, though the telangiectic network reminds one of erythematous lupus. Syphilis and leprosy can likewise be set aside. On the other hand, when the antecedents of the patients are studied, there can nearly always be discovered suspicious auscultation, or the presence somewhere of tubercle bacilli. The authors, therefore, would place the complaint in the group of atypical cutaneous tuberculosis. It has also analogies with the sarcoids of Boeck, in particular those with large nodules, but while there are resemblances there are also differences. Only one case could be examined pathologically. In general the tissues exhibited features of a tuberculous character like those met with in lupus tumidus non exedens. The infiltration consisted of epithelioid cells, giant cells, and leucocytes, and was in all respects very closely allied to the histology of tuberculous lupus. But here again there were similarities to the sarcoids of Boeck. The authors failed to stain any bacilli in or near the giant-cells. A guinea-pig which was inoculated increased in weight, and showed no sign of tuberculous in its organs when killed some months later. *Edinburgh Medical Journal*.

On the Influence of Diet on Skin Diseases.

The teaching of Hebra that the majority of skin diseases are specific affections of the integument, and, as such, require external management to the neglect of internal regulation still holds its ground in Austro-Germany. The French, British, and American dermatologists, on the contrary, incline to the view that many, if not the most, of these disorders are rather the expression of an inner dyscrasia, and therefore demand dietetic adjustment. Hubner (*Med. Klinik*, 16th March 1913) thinks that the differences of view can be bridged over, and by judicious selection of aliment a variety of skin diseases can be favourably influenced, though it might be too much to say that they can be cured by such methods alone. Such instances as that of itching in jaundice, or furunculosis in diabetes are not included, but rather the changes in the actual disease of the skin by diet. The dermatoses of infants are to be judged differently from those of adults. Thus the digestive canal of young children is much

more permeable to the tubercle bacillus than is that of older ones, or of grown up persons. Similarly the intestinal mucous membrane of suckling infants absorbs fermentation products more readily than that of older persons. We should therefore avoid over burdening the bowel so as to obviate the formation and absorption of abnormal results of decomposition. Eczema, particularly of the seborrhœic type, is specially common in over-fed, obese children. In such cases Feer limits the quantity of milk ingested materially, and completely withholds it in the second half year, replacing it with groat or meal gruel. Fruit juices and cooked vegetables are well borne quite early in life, and help to regulate the bowels. The cream in milk is an element to be avoided, and whey or buttermilk given in place of pure milk. According to his experience, eggs are ill borne by children with eczema. Less securely based is the teaching of Finkelstein that the damage arises from the salts contained in milk. That the hygroscopic properties of chloride of sodium, when deposited too freely in the tissues of children with an exudative diathesis, originate œdema of the skin and weeping eruptions. Still external remedial measures cannot be dispensed with, else how otherwise can we combat the itching, or obtain absorption in the inflammatory areas, than by outward treatment. The fear of curing an eczema, as this may "drive some poison in," is unfounded, and Veal maintains is wholly groundless. When we leave the age of infancy, whose welfare depends so closely on the proper action of the bowels, we notice that the influence of food on skin diseases rapidly diminishes. Still there are certain ailments of the child and of the developmental periods where improper feeling is causative. Strophulus infantum or lichen urticatus is an example. Here reduction in the quantity of the food, regulation of the bowels by administering preserved fruits or mild laxatives often the mere addition of vegetables to a too exclusively meat diet, will prove sufficient to procure normal evacuations. To prevent abnormal decomposition in the intestines use may be made of menthol or carbolic acid in pills. One must bear in mind the modern teaching as regards anaphylaxis in estimating the connection of the hypersensitiveness of the skin to certain articles of diet so as to eliminate such from the nutriment. In acne, again, it has been found that those fats with a low melting point should be avoided. Jessner has seen cases of pruritus ani which vanished with the disuse of tea and coffee, which possess general nerve-stimulating constituents.—*Edinburgh Medical Journal.*

Tuberculosis.

As Hallion has remarked, the administration of preparations of organs is useful not only to replace substances lacking in the system, but also to stimulate the corresponding organs to increased activity, to relieve symptoms themselves, and even to regulate the function of various organs, reducing their action when it is excessive. Thus understood, organotherapy has a far larger field than when substitution alone is its aim, and affords effectual help in a number of diseases in which it had long remained unutilized. Among these affections is tuberculosis.

Thyroid Substance.—This is indicated only in sluggish cases, e.g., in chronic articular tuberculosis, especially if evidences of thyroid inactivity are present. The dose should be small— $\frac{1}{16}$ to $\frac{1}{8}$ grain (0.01 to 0.03 Gm.) of thyroid substance *pro die*—and the patient kept under watch for tachycardia. In tuberculous patients readily developing fever and with the usual tendency to tachycardia, thyroid preparations should only exceptionally be used.

Hepatic Substance.—Gilbert asserts that 4 to 8 capsules, each containing 4 grains (0.25 Gm.) of liver substance, *pro die* are effective in arresting or preventing the return of hemoptysis. The author has often been able to confirm this assertion. Triboulet and the author have seen good results in some alcoholic tuberculous patients with hepatic enlargement. Lemoine and Gerard report having seen benefit in the first and second stages of tuberculosis from intratracheal or subcutaneous injections, or oral administration, of an extract of bile prepared with petroleum ether.

Adrenal Therapy.—In cases of tuberculosis with low arterial tension and asthenia the administration of epinephrin, 5 to 10 drops of the 1:1000 solution daily for five to ten days, followed by a like period of rest, or of adrenal substance, $1\frac{1}{2}$ to 5 grains (0.1 to 0.3 Gm.) daily, is formally indicated. If there is a tendency to hemoptysis, however, or if the blood pressure is too much increased, the measure is to be discarded.

Pituitary Substance.—The extract of the whole gland in doses of $1\frac{1}{2}$ to 3 grains (0.1 to 0.2 Gm.) daily, according to the author's experience, tends distinctly to raise the blood pressure. It also seems to lower the cardiac rate, improve the appetite, promote sleep, and at times benefit the general condition. Such medication, however, in no wise specifically acts on the tuberculous state.

Muscle Substance.—The administration of raw meat or meat juices to the tubercu-

lous, as advised by Richet and Hericourt, is inconstant in its effects, to say the least. It should, however, still be accorded a place in the diet of these patients, more as a stimulating nutrient than for any specific effect.

Splenic Substance.—Bayle recently claimed that he had secured good results by administering 100 Gm. $3\frac{1}{2}$ ounces) of fresh hog spleen every day. Splenic "extracts" may be substituted. No definite pronouncement can as yet be made as to the value of this method, nor concerning the still more recent recommendation of giving splenic substance in combination with hepatic and small amounts of thyroid preparations.

Pancreatic Substance.—Lœper and Esmonet advise the administration of large amounts of pancreatin—2, 3, and even 4 Gm. (3ss-j)—in keratin-coated capsules of 0.25 Gm. (4 grains) each, daily. While in patients with lung cavities the results were bad, first- and second-stage cases and especially patients with involvement of the serous membranes showed a return of appetite, a considerable gain in weight, and a markedly improved general condition. The author has frequently seen pancreatic preparations improve the digestive functions in the tuberculous.

In brief, it may be stated that, while these organic preparations often do not possess directly antituberculous properties, they serve to make up for insufficiency of the various organs coming under the baneful influence of the tuberculous infection, reinforcing their action and assisting the organism in its fight against the disease.—Lereboullet, in *Paris medical*.

Diagnosis of Suppuration in the Maxillary Antrum.

The labors of numerous rhinologists have brought home to the medical profession the frequency of suppuration in the various accessory sinuses of the nose, and the obscurity of the symptoms in many cases. In particular, the influenza bacillus seems to have a partiality for settling in these cavities, and for defying dislodgement. Not only are the evidences of such sinusitis often obscure; but even when there is good ground for suspecting suppuration of this kind, it is often difficult to be sure exactly which regions are involved. Thus acute suppuration in the maxillary antrum often mimics with some exactness the symptoms of frontal or ethmoid sinusitis. In transillumination a very valuable aid to diagnosis exists; but accumulating experience shows that it does not do to trust too absolutely even to this method. Sometimes a maxilla which seems definitely opaque is

fouad to contain no pus; and sometimes, too, one which is translucent turns out to be full of pus after all; so that neither negatively nor positively is the test entirely diagnostic.

Impressed with these limitations of the transillumination method, Dr. Watson-Williams advocates in the *Journal of Laryngology* a return to the old plan of aspiration of the antrum through the middle meatus in all doubtful cases. This he performs, not with a trocar and cannula, but with a special suction syringe provided with a narrow bore needle. After cocaineization, the procedure causes almost no pain. The syringe is nearly filled with distilled water, which is quickly injected through the exploring needle into the antrum, and then at once sucked back into the syringe. Thus the nature of the contents of the antrum is discovered, and the diagnosis of suppuration can be made when all other methods have failed to clinch it.—The London Hospital.

Sodium Salicylate as an Antiseptic.

Sapojkov has recently drawn attention to the efficacy of sodium salicylate as an antiseptic dressing in cases of furunculosis and anthrax. To obtain the benefit of the drug it is necessary that the affected part be denuded of epithelium, if this is not already the case. To that end he gently scarifies the skin round the furuncle and then applies the drug freely in a finely powdered condition to the denuded area. Within twenty-four hours excellent results are obtained, pus being freely discharged from the furuncle, and only slight pressure is necessary to cause the exit of the comedo from the deeper tissues. The author considers this method superior to that of Bier because of its simplicity and because it can be applied to all parts of the body. The only drawback to its use lies in the fact that a sharp burning pain is experienced when it is applied to the denuded surface. He has made use of the drug as an insufflation in cases of tonsillitis, but reports that its disagreeable taste often induces patients to refuse to undergo a systematic course of treatment. When patients can be induced to persevere, the results in such cases are excellent.—The Hospital, London.

Multiple Arthritis of Doubtful Origin.

Fitzwilliams reports the case of a girl, aged fifteen, with the following history: About eighteen months ago the tarsal joints became painful and swollen, first the right and then the left. About four months later the wrists became affected, the left first. The condition has steadily become worse,

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the pain has remained, but varies from time to time, while the movements of the affected joints have become very limited. Present condition; The patient limps on walking, owing to the pain in the tarsal joints of the right foot; the ankle joints are free. She has pains at night both in the foot and in the wrists. Both wrists are flexed, the left one having no movement at all, while the right one has very slight movement. The synovial membrane of the joints is thickened and the interphalangeal joints of the hands are distended with fluid; there has been no abscess formation. The heart, lungs, liver, and spleen are normal, and there are no enlarged glands. No history or evidence of syphilis. The treatment hitherto has been carried out apparently under the impression that the condition is tuberculous, for the wrists have been in plaster of Paris for three months. X-rays show very little change in the wrists. The condition is thought to be due to a chronic infection and not to tubercle.—Proceedings of the Royal Society of Medicine.

The Cause of Death in Pancreatic Necrosis.

Dario Maragliano describes the symptoms of pancreatic necrosis as violent abdominal pain, localized in the epigastrium and followed by vomiting. The pulse becomes small and frequent, and a condition of collapse is reached in from ten to twelve hours from the beginning of the disease, followed by death. The autopsy shows hemorrhagic exudation in the abdomen and a pancreas that is large, friable, and cyanotic. In the peripancreatic fat are found areas of steatonecrosis. The basis of the whole trouble is more or less extensive pancreatic necrosis, the other findings being secondary. This inflammation, followed by necrosis, is not of bacterial origin. The author has made experimental researches as to the causation of pancreatic necrosis in animals, as a result of which he believes that the causation is as follows: Death from pancreatic necrosis is due to a form of poisoning; the poisons are not due to soaps, nor ferments, nor the products of pancreatic autolysis; the poisons must be sought in special toxic substances which develop from the products of the autolysis of the pancreas and the fats of the organism.—Il Policlinico.

Test for Hyperchlorhydria.

Cippollina claims when an aqueous solution of anilin is added to a solution containing HCl and a few drops of sodium hyperchlorite are added the mixture assumes a color which varies with the intensity of the HCl. If it contains more than 2 per cent.

of HCl a permanent amethyst color results. If the amount present exceeds $\frac{1}{4}$ per cent., a reddish-violet color changing to yellow appears; if less than $\frac{1}{4}$ per cent., a permanent dark violet color appears. By this means the hydrochloric acid of the gastric contents can be determined in a few minutes.

The test meal used by the author consists of 200 grm. of potato and 200 c.c. of white wine and water in the proportion of 1:2. A yellow reaction proves that hyperchlorhydria can be excluded. The same color is obtained with lactic acid, but only in 10 per cent. solutions.

A ten per cent. solution of calcium hyperchlorite may be substituted for the sodium solution.—La Tribune Medicale.

Changes in the Staff of the University of Alabama.

Dr. Andrew H. Ryan, instructor in physiology and pharmacology, has accepted the chair of physiology in the University of Alabama, succeeding Dr. John Van de Erve, who resigned recently to accept a position in Marquette University, Milwaukee. Other appointments on the staff of the medical department of the University of Alabama are the following: Dr. Howard H. Bell, of the University of Pennsylvania, full time assistant in the department of pathology; Dr. Jesse P. Chapman, instructor in orthopedic surgery; Dr. Percy J. Howard, associate professor of surgery; Dr. E. S. Sledge, instructor in radiography; and Dr. Julius G. Henry, instructor in medicine.

Postconceptional and Hereditary Syphilis.

Jean Bobrie (*Etude sur la Syphilis*) gives the following conclusions from his study of postconceptional syphilis and of heredity syphilis. In the absence of all treatment we may find placentas that are macroscopically healthy along with children evidently syphilitic. Nevertheless, maternal treatment has a marked effect on placental hypertrophy. The gravity of the syphilis of the fetus bears no relation to the hypertrophy of the placenta. Hydramnios is exceptional. At whatever time of pregnancy the maternal chancre is contracted the fetus is still infected. The degree of infection varies with the time of infection; the maximum gravity, causing macerated fetus, is at the third month; the gravity then decreases. The fetus never receives a true immunity; while there may be no evidence of syphilis the disease is still present in a latent form. Postconceptional syphilis is more serious for the existing pregnancy than for a later one. The fetus is always

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should be used internally, and also as a local application in eruptions. It aids in limiting the spread of the infection

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infected long before the roseola appears; infection occurs as soon as the mother has been attacked by the chancre. The most effective treatment is mercury in the form of soluble salts or pills; gray oil and salvarsan have not so good an effect by far. Hereditary syphilis can only be transmitted to the fetus by way of the placenta; the spermatozoon which contains a treponema cannot fecundate an ovum. Exceptions to Colles' law are not true. Mothers who do not show syphilitic lesions are still infected, the syphilis being latent. Heredodystrophy is a consequence of syphilis, but not syphilis itself; such infants can become infected by syphilis, and it is then transmissible by the germinative cell only.—Archives of Pediatrics.

Postdiphtheritic Bulbar Paralysis.

Trommer and Jakob report the case of an eight-year-old girl who six weeks after an attack of diphtheria manifested a facial paralysis and a few weeks later a difficulty in swallowing. At the same time there developed a slight degree of ptosis, and a partial paralysis of the soft palate. Speech became indistinct. There then occurred an attack of suffocation, with ptosis, facial paralysis, spasmodic contractions of the extremities and of certain facial muscles, paralysis of the right oculomotor nerve, cardiac weakness, and death. Autopsy showed subacute inflammatory changes involving the vessels of the bulb and their vicinity. There were also changes in the peripheral nerves. The authors reach the conclusion that postdiphtheritic paralysis is the result of central as well as peripheral lesions, sometimes the one, sometimes the other, predominating.—Zeitschrift f. d. ges. Neur.

The Heart Sounds of Sick and Healthy Children.

Schlieps states that in older children suffering from severe forms of infectious dis-

ease the first sound of the heart becomes inaudible. The relaxed condition of the skeletal musculature suggests a similar condition of the heart muscle. The softening of one heart sound at the same time that the blood pressure remains normal indicates that it is the first sound that is muffled. The remaining audible tone is louder over the pulmonic area than at the apex. The administration of camphor causes both tones to become more distinct, even in cases with a normal blood pressure.—Monatsschrift für Kinderheilkunde.

Tertiary Specific Ulceration of the Pharynx Undergoing Malignant Transformation.

McKenzie reports the case of a man, aged eighty-one years, whose throat had been troubling him for three months. The syphilitic element was still active; it had destroyed the uvula and much of the soft palate, and had eroded the tissues in the tonsillar regions. In the region of the left tonsil a raised area, rather nodular in appearance and hard to the feel, made the author suspect the existence of malignancy. The nodule was therefore removed and examined for malignancy, with a positive result. There was a small, hard gland under the left angle of the jaw. The Wassermann reaction was negative. The patient was given iodide of potassium and had already benefited by it. The occurrence of epithelioma in the midst of what seemed to be an active tertiary ulceration was an interesting clinical experience.—Proceedings of the Royal Society of Medicine.

Local Anesthetics.

Various alkaloids from plants allied to cinchona were tested by the author in comparison with quinine and cocaine, and a number were found to possess very great local anesthetic power. The procedure employed in estimating this power was to

ascertain, by applying solutions to the eyes in rats and mice, the lowest percentage of solution which would cause local anesthesia lasting from thirty to ninety minutes. Quinine was found to produce this result in 3 per cent. solution; cocaine, in 2.5 per cent. solution; hydroquinine, 2 per cent.; ethylhydrocupreine, 1.3 per cent.; isopropylhydrocupreine, 0.1 per cent., and isoamylhydrocupreine, 0.08 per cent. The last named alkaloid is thus no less than 32 times as strong a local anesthetic as cocaine, and is the most powerful substance of this class at present known.

Cupreine is an alkaloid occurring naturally in the so called "false cinchona" tree, *Remijia pedunculata*, and is closely related to quinine, from which it differs in containing one less methyl group. The derivatives of cupreine referred to were prepared artificially.

Whereas cocaine proved injurious to the ocular tissues when the concentration applied was only slightly increased, quinine remained harmless until the concentration was three times that previously used for anesthesia. With isopropylhydrocupreine, moreover, the noxious concentration was 10 to 20 times greater than the anesthetic concentration. This property renders it possible by using high concentrations to secure anesthesia lasting several days, and will doubtless open to these agents a field in the treatment of neuralgic conditions. Morgenroth.

Another observer reports a clinical trial of the cupreine derivatives. The anesthesia appeared less rapidly than with cocaine, but lasted longer, post-operative pain being less marked. The hyperemia induced by these substances when they are employed alone is easily counteracted with epinephrin. As was to be expected in view of the low concentrations used, no toxic effects were noted.—Unger, *Semaine medicale*.

Typhoid Appendicitis.

From clinical studies and a review of the literature the author is convinced that there may occur a localization of the typhoid infection in the appendix, and that for such a condition the term "typhoid appendicitis" is a proper designation. The diagnosis of this unusual morbid combination rests upon the symptomatology of appendicitis proper and upon the concomitant symptoms of typhoid, as well as the Widal test. Not every appendicular syndrome appearing at the onset or later in the course of typhoid fever represents a bona-fide appendicitis, however, and hence it is necessary in practice to make a distinction between true and false typhoid appendicitis. The appearance of typhoid appendicitis does not justify

immediate operative intervention, both because the condition may be simulated without being actually present and because the condition may evolve favorably and terminate in perfect resolution, as is the case with typhoid localized in the ileum. If, however, the symptoms pointing to appendicular trouble are so marked from the outset as to lead to a suspicion of ulceration of this structure, or, again, if the symptoms, mild at first, subsequently become so serious as to cause apprehension concerning the patient's life, intervention is formally indicated.—Fazio, *Giornale Internazionale delle Scienze Mediche*.

Epistaxis.

The author has frequently had success with the following procedure, originally suggested by Naegeli: The patient sits upright in a chair, and the operator, standing behind him, places the index fingers of both hands beneath the body of the lower jaw on each side, while the thumbs rest behind the angles. Gentle traction is then made upward upon the head, which is simultaneously extended backward as far as the patient can comfortably bear, thus putting the muscles of the neck on the stretch. An artificial anemia is thus set up in the vessels of the head and also in the smaller vessels of the nasal mucous membrane, causing the epistaxis to cease. The procedure should not be continued longer than from one to two minutes, or a partial or complete loss of consciousness may result.—Ritschl, *Munchener medizinische Wochenschrift*.

Camphor in Surgery.

Caudel (*Pror med.*) writes enthusiastically on the use of camphor dissolved in oil in a great variety of cases. He quotes Lemaire as having written upon the dosage of camphor and its toxicity even in small doses in certain cases. The author has not found it toxic even when given in massive doses in operations involving the peritoneum. There are two methods of administration—(a) subcutaneous, (b) intraperitoneal. Baudel quotes several cases of severe injury with shock, or shock following operation, in which 20 c.cm. of camphor in oil were given. In one case this was repeated three times in one day with marked improvement in the pulse and general condition. There were no toxic symptoms. In every case the breath had an odor of camphor some time after injection. The injections are painless and cause no local reaction. In the intraperitoneal cases, the value of Recklinghausen's discovery that a small quantity of oil in the peritoneal cavity diminishes absorption by the

lymphatics and so prevents resorption of toxic materials, is enhanced by the use of camphor in oil, as the latter acts as a cardiac tonic as well as being an antiseptic; further it diminishes the risk of adhesions. The author in his personal practice has injected as much as 150 grams of a 10 per cent. solution. His statistics fully bear out the benefits of the method.—British Medical Journal.

Obstetric Hints.

Writing from the German obstetric clinic in Prague H. H. Schmid (Muench. med. Woch.) gives some practical hints, which he thinks will be welcomed by the practitioner. In practically all difficult manipulations, such as version, reposition of a prolapsed arm or cord, and the like, the pelvis should be raised, as is done for spinal anaesthesia. He states that the manipulation becomes incomparably easier in this position than when the patient is lying on one plane. It must, however, be pointed out that the Continental obstetricians employ the dorsal and not the left lateral position. The second point which he touches upon is that of ether anaesthesia. He is of opinion that the dogma of the text books that chloroform only may be used in childbirth should be done away with. Chloroform tends to damage both the kidneys and the liver, and it is just these organs which are already more or less damaged during pregnancy. On the other hand, the heart is usually strong enough to withstand the extra strain of the parturition, and he is therefore in favor of selecting ether as the better anaesthetic of the two for childbirth. It can be given by the drop method, including a very light unconsciousness, even in very protracted labors. The third subject is that of the suture of the torn perineum. He states that in the majority of large obstetric clinics the obstetrician does not bother about such small details as the suturing of a perineum. It is, in his opinion, absolutely necessary to suture a second degree tear in stages and to pay special attention to the exact apposition of the muscular layer and the fascia. In order to obtain satisfactory results, two things are necessary: First, the operator must be able to examine the tear carefully in a good light; and, secondly, the patient must keep quite still while it is being sewn up. Both conditions are very materially facilitated by the employment of Braun's local anaesthesia (1 per cent. novocain solution with 0.0005 per cent. suprarenin). Between 50 and 75 c.cm. of the solution is usually required. This renders the parts absolutely anaesthetic, and the operator can inspect the deeper parts of the wound and

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apply as many sutures as are necessary without causing the patient any pain. If the first point of insertion of the injection needle be through the wound, even the injection need not cause any pain. The wounds heal well by first intention. Further, he calls attention to the coincidence of the appearance of dyspeptic symptoms in the infant and the getting up of the mother. He explains this coincidence in that while the mother is still kept in bed, the infant is put to the breast at the proper intervals by the nurse. When once the mother gets up she succumbs to the temptation of giving the baby the breast each time it cries, which naturally produces indigestion. In the last place, he recommends ozet baths for premature infants.—British Medical Journal.

Phototherapy for Tuberculous Glands.

Iselin (Corresp. Blatt.) relates his experience in the treatment of 202 cases of tuberculous glands with x-rays. The results were good; and he states that at Basle during the past three years surgical treatment in these cases has been almost abandoned. The researches of Grober have shown that tubercle bacilli may gain entrance to the lungs by way of the tonsils and retropharyngeal glands, and the author considers that the treatment of glands in which bacilli are lodged is therefore of the greatest importance. So long as the glands are single and

not softened, he thinks thorough extirpation the best method, but when they are matted together or softened the conservative treatment with light is to be preferred. Direct insolation has proved beneficial in these cases; but it is only in certain places, such as Alpine heights or in hot climates, that it can be satisfactorily carried out. Moreover, experiments by Finson and others seem to indicate that the effects produced at Laysin on the deeper tissues by insolation must demand some other explanation, for they have shown that not only pigment in or on the skin, but also the red coloring matter of the blood, greatly hinders the passage of the chemical rays. Thus, a piece of photographic paper buried in a dog's body to the depth of 3 cm. remained unchanged after the animal had been exposed to strong sunlight for an hour; and a strip placed behind the lobe of the ear was affected by light much more quickly if the blood were squeezed out of the tissues between two plates of glass. Roentgen rays have the advantage of being more penetrating than sunlight. Perthes has shown that at a depth of 4 cm. the light retains 40 per cent. of its intensity, and this penetrative power may be increased by passing it through a thin plate of aluminum, which, moreover, filters of the rays most injurious to the skin. The sensitiveness of the skin also may be diminished by any means tending to deprive it of blood: while, conversely, the effect on a diseased area is more intense during the focal hyperæmia induced by a tuberculin reaction, or by Bier's congestion, or in any other way. It is not claimed that the bacilli are killed by the x-rays; the intensity of light required for that would destroy the overlying tissues. The success of the treatment is only rendered possible by the fact (which has been verified experimentally) that the light has a more destructive action on glandular tissue and granulations than it has on the connective tissues. The process is slow, and its exact nature has not yet been satisfactorily explained, but the effect on the diseased structures is evident. A few hours after the treatment the parts affected become swollen, but a fortnight later matted glands become separated, abscesses shrink, and fistule close up after one or two sittings. Caseous glands require about ten sittings, but end by disintegrating without previously undergoing any apparent structural change. The treatment of large masses is long and tedious, and may fail on account of the sensitiveness of the skin to the rays; but the results are better than those of extirpation, for scarring is avoided, and all infected glands are searched out and destroyed by the light. Wetteler disputes the view that general in-

fection may follow the destruction of tuberculous glands, but the author has seen this happen once, and temporary disturbance of the general health as an effect of the rays is common. However, the influence on the general health of the patient is usually very good, and the author suggests that the destruction of the tuberculous glands may give rise to some kind of auto-inoculation, instancing in support of this view the injection of sterilized caseous gland tissue by Patersen with the object of raising the opsonic index. In conclusion, the author considers that the use of x-rays is of real value in these cases, superior to sunlight in its local effects, but inferior to it in its tonic effects on the whole body. He recommends, therefore, that if possible the treatment should include sun baths for the whole body, with local applications of x-rays once every three or four weeks.

A Small Epidemic of an Areate Alopecia.

Fox (Brit. Journ. Dermat) describes an epidemic of a curious form of alopecia which occurred in a school. The patient were all girls whose ages ranged from 9 to 14 years. The first case was admitted to the school in 1907 with the disease under discussion, and during the next two years was discharged, and readmitted to the school on two different occasions, always with alopecia. In October 1904 fifteen girls were admitted to the school, all affected with small bald patches. A few weeks later other girls were admitted, making 21 cases in all. The patients were all admitted, from the Bethnal Green schools at Leytonstone, and all came from one house at the schools. The patches of alopecia were all small, varying from the size of a finger-nail to a shilling. The areas were not shiny, were nearly denuded of hair, and for the most part showed "exclamation mark" hairs such as are usually seen of alopecia areata. Many of the follicles where hairs had fallen out were plugged with pigmented debris. The borders of the patches were not definitely circumscribed. In almost all cases only a single patch was present. This might be located on any part of the scalp. Repeated examination of stumps and plugs from the follicles failed to reveal any fungus or organism of any kind. All cultures were negative. The clinical features were those of alopecia areate, but the small size of the patches, their frequent oval or lanceolate shape, and their rapid yielding to treatment were all points of difference from ordinary alopecia areata. The patches were not scars, and there was no trace of impetigo, which frequently leaves bald patches for a consid-

erable times after the impetigo lesion itself has disappeared. All the cases rapidly got well on the application of ung. hydrarg. oxidi rubri with cantharides, and no further patches developed. In his experience evidence of contagion in alopecia areata in London is scanty, although the disease is very common. He has however, seen many examples of family alopecia areata in which members were affected at different ages, but without the striking evidence of contagion seen in ringworm. In contrast to ringworm, alopecia areata shows a marked tendency to recur. Fox's own experience of ordinary alopecia areata is that it is not contagious, and it has been his practice to certify that cases are fit for school if the general health is good.

The Transference of Organisms from the Skin by the Knife.

Steinegger (Zentr. f. Chir.) has set himself to find out to what extent a knife used for making a skin incision may pick up organisms from the skin and transfer them to the deeper layers of a wound. He began his experiments by making incisions through the undisinfected skin of dead bodies, and then plunging the knife into culture media. All such experiments gave a positive result, a growth of organisms resulting in every case. In the next place he tested four cases in the living subject in which the skin had been prepared the night before for operation, but had not been finally disinfected on the operating table. An incision was made through the skin only, and a culture then made from the knife blade. Three cases gave a growth, the fourth did not. The wounds made in these cases healed by first intention. Finally 347 observations were made on operation cases after the skin had been disinfected by various methods in common use. In 72 of these a growth was obtained, and in the remaining 275 the result was negative. The number of cases was too small to allow any decision to be made as to the relative value of the different methods of disinfection used, but Steinegger claims that the general result clearly shows that a knife used for a skin incision should be regarded as a possible source of infection if used for the deeper layers of a wound. The organism most commonly found was the staphylococcus albus.

Vacuolisation of the Muscular Fibres of the Heart in Infantile Atrophy and Hypotrophy.

Variot and Caillan (Cin. Infant.) described the appearances seen in transverse and longitudinal sections. The vacuoles are round or oval cavities, with sharp out-



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line, more or less confluent on the line of section. Each forms a shining space in whose centre the muscular substance seems to have vanished. When, however, the vacuole is recent and small, granular substance may be seen in it. Reagents show that this condition is not associated with fatty degeneration. Longitudinal sections show that generally the vacuole is seated near or around the nucleus, and there seems to be an increase of perinuclear sarcoplasm. Between the nuclei several vacuoles in a longitudinal series are sometimes seen, but these internuclear vacuoles are much less common than the perinuclear. The parts of the myocardium most frequently affected are, in order of frequency, the left ventricular walls, the pillars of both sides, the apex and the left auricle. Three stages are described: In the first stage the lesions are discrete, there is an hypertrophy of certain muscular fibres, 40 to 50 mm. There is no atrophy, the muscle nuclei are slightly proliferated and hypertrophied, vacuoles are scarce, but granular collections and pale-colored patches in the thickness of the fibres may be observed. The perinuclear sarcoplasm is hypertrophied. The heart is large. This type is found in infants in whom hypotrophy is little marked. In the second stage the lesion is in full evolution, hypertrophied fibres are no longer found, the perinuclear sarcoplasm is increased, and atrophy mark-

ed, certain fibres having a moniliform appearance. The nuclei are proliferated and distorted, the vacuoles numerous and marked and heart enlarged. This type was met with especially in a case of tuberculous hypotrophy, and corresponded to that met with in cases of marked hypotrophy with arrest in height add weight due to gastrointestinal trouble. In the third stage there is generalized vacuolation and atrophy of the fibres; it is met with in a marked degree in cases of Parrot's atrepsia. Seventy-two cases were observed by the authors; the ages ranged from a few days to three years; the majority were between three and seven months. The activity of the process was increased by infection, but in a manner which varied with the nature of the agent. In diphtheria, for instance, there was extreme vacuolisation with great degeneration of the fibres, which were granular and swollen but had little tendency to atrophy. In tuberculous hypotrophy atrophy was marked, and in congenital syphilis both vacuolisation and atrophy were manifest. As to the probable mechanism of the process of vacuolisation it is plausible to suppose that the myocardium, which is in a continual state of intermittent contraction, not being able to renovate itself to meet its physiological requirements, is obliged to fall back on its own reserves.—Brit. Jour. Child. Dis.

The Treatment of Acute Morphine Poisoning.

Oppenheim details the following procedure:

1. Lavage of the stomach with a 1 to 2000 solution of permanganate of potassium. This lavage is necessary even if the drug has been taken hypodermically, for a certain amount of this is eliminated by the gastric mucosa. If a stomach tube is not available one should excite vomiting, if the drug has been taken by the mouth. For this purpose one should use sulphate of copper or sulphate of zinc, but no ipecac or apomorphine, for these tend to increase the asthenia.

2. The use of a purgative enema.

3. Try to prevent the patient from going to sleep, by walking him about, etc.

4. Administer strong coffee with or without the addition of brandy, either by mouth or by rectum. Give inhalations of oxygen. Administer hypodermically every hour 2 c.c. of the following;

R Camphor, 4 grams.

Sulphuric ether, 12 grams.

Sterilized oil, ad 20 c.c.

4. Administer antagonists to opium. Atr-pine should not be used. Even in small doses it increases the cerebral hyper-

emia. Caffeine should be given hypodermically in large doses, the following solution being employed:

R Caffeine, 2.50 grams.

Benzoate of sodium, 3.50 grams.

Distilled and sterilized water, ad 10 c.c.

Inject 2 or 3 c.c. several times a day.

The best antidote for opium is permanganate of potassium. It transforms morphine into an inoffensive oxide. The following solution should be prescribed;

R Permanganate of potassium, 1 gram.

Distilled water, 500 c.c.

One-half of this solution should be given immediately; the rest, in half an hour. The potassium salt may, with advantage, be replaced by the sodium salt.

5 The treatment should be completed by the administration of diuretic drinks. Close watch should be kept of the patient who, after being apparently sufficiently aroused, may relapse into somnolence.—Le Progres Medical.

The Diagnosis of Some Common Symptoms in Childhood.

Diagnosis in children rests largely on the result of clinical examination. The general appearance and expression of children who are ill are points which should be studied well. A child's face is frequently a clear index of the severity of the illness, or indeed of the actual complaint from which it is suffering. Small children will often resent examination and the opportunity should be taken of carefully but not too openly noting the general appearance whilst questioning the patient. As examples of points to be gained from a casual inspection I may mention lung disease, the flushed face and working alae nasi of a case of pneumonia, the anxious expression and rather labored breathing of a case of broncho-pneumonia, the sallow complexion and difficult respiration associated with an empyema. The severity of a case of enteritis can be judged by the sunken appearance of the eyes and the fontanelle and the pinched inelastic state of the skin. A peculiar meditative look is seen on the face of the child with tuberculous meningitis and a dull, heavy appearance in typhoid fever or pyelitis. Extreme pallor will suggest a severe infection, diphtheria, rheumatism or one of the anemias of infancy. The pinched, anxious look of the face with perhaps a slight tendency to cyanosis will suggest the severity of an abdominal condition such as peritonitis. The red, crusted eyelids, running nose and blotchy appearance of morbilli, and the puffy eyelids, with perhaps subconjunctival hemorrhages and bloated face of the child with severe pertussis are often met with. The cry of the infant may

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also assist in coming to a diagnosis, the improperly fed baby has what can only be termed a "hungry cry." Screaming, on the other hand, may be occasioned by colic, brain disease or otitis media. Crying out and handling the limbs apart from local injury or disease may be associated with a general disturbance of nutrition as in rickets or scurvy. The character of the cry is then suggestive, the hoarse voice of laryngitis, the weak wail of the feeble infant, and the gradual loss of voice in diphtheritic laryngitis.

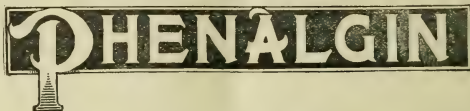
The cough should also be noted, the paroxysmal cough of pertussis, the hoarse barking cry in laryngitis, frequently met with at the onset of morbilli, the short, persistent, often painful cough of pleurisy and pneumonia, and the inability to cough when the lungs are being choked with secretion as in severe bronchitis. All these points may be made out before proceeding to examine the child, and needless to say the most unpleasant part, looking at the throat is left to the last. It is usually advisable whilst examining the chest to let a small child sit on its mother's lap, and it is often best to listen to the back first, so as not to alarm the child by the sight of the stethoscope, and to accustom it to the feel of the

chest piece. It is to be remembered that the apex of the heart in children under four years of age is normally situated in the fourth space and often somewhat outside the nipple line. It has reached the adult position by twelve-fourteen years of age. The pulmonary second sound, as opposed to the case in adult life, is normally rather louder than the aortic. Second examination of the lungs in children is extremely deceptive as regards the physical signs obtained. The breath sounds in small children are usually very distinct and normally rather harsh or "puerile." In comparing the sounds heard on the two sides of the chest, most reliance is to be placed on the "pitch" of the breath sounds, rather than on the doubtful query of prolonged expiration or bronchial breathing which is unaccompanied by any marked impairment of the percussion note. Bronchial breathing may be heard at the apices in quite normal children who are breathing deeply with their mouths open. The abdomen is normally prominent in infants owing to the size of the liver which extends half an inch below the costal margin in the right mammary line, the spleen, however, should not extend beyond the costal margin.

Babinski's sign giving a normal flexor

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always places a severe tax on the physician's skill and resources. Distressing and intractable as it invariably is, too often its relief is accomplished at the cost of addiction to the opiates. Through the use of



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response in the adult, is extensor in children under three; by that age in a healthy infant it should have become flexor. If, however, in premature or ill developed infants who are late in walking, a flexor response is obtained. Thomson states that it is of good omen, because it indicates that cerebral spastic eiplegia is not in process of development and therefore justifies the prediction that such children will ultimately be able to walk.—Kebbell, The London Practitioner.

"Paraldehyd" possessee many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is to a great extent, disguised in Robinson's Flixir Paraldehyd (see page xiv this issue) which is an elegant preparation.

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Immunity of the White Rat to the Diphtheria Toxin.

Pettit reported to the Societe de Biologie, June 7, the results of his investigations on

this subject. He found that this animal possesses a resistance to the diphtheria toxin greater than that of any other mammal. Whereas a dose equal to one fifteen-thousandth of the body weight kills in less than forty-eight hours, it is necessary to give an amount exceeding one one-hundredth of the body weight to accomplish this result in the rat. This resistance is not dependent upon the antitoxic properties of the blood serum or upon the power of leucocytosis, but is the result of the natural immunity of the bodily cells.—Gazette des Hopitaux.

Combined Bromide and Thyroid Treatment of Epilepsy.—Sicard (Jour. de Med. de Paris) points out that the tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet 0.1 gm. (1½ grain) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 1 gm. (15 grains), of potassium bromide are given daily at equal intervals, say at 10 a. m. and 10 p. m., apart from meals, and dissolved in half a wineglassful, or less, of water. The bromide is to be given regularly without suspending the treatment. A chlorine-free diet is enjoined, and should acne appear, the pustules are to be treated with an application of chlorin ated soda solution and sulphur ointment.

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Arsenic and Pancreatin in Pernicious Anaemia.

Brieger (Deut. med. Woch.) recalls a publication by himself and Trebing, in which they set out that the high antitryptic titre found in persons suffering from carcinoma could be reduced to the normal level by an internal medication with pancreatin. They further found that other carcinomatous patients resisted this action of the ferment. The indications of the previous observations were interpreted as suggesting that pancreatin might, when combined with other medicaments, prove of some therapeutic use in certain diseases. For example, they suggest the treatment of tuberculosis with tuberculin and pancreatin. Brieger now returns to this idea and states that after a high antitryptic titre was found in the blood of persons suffering from pernicious anaemia, an attempt was made to treat this disease with arsenic combined with pancreatin. The result was beneficial although only temporary. The writer gives the clinical histories of three cases. Two of the patients died at a later date, after they had been discharged improved from hospital. The third patient was treated three years ago and is still under observation as an out patient. She has remained well up to the present. The treatment has therefore to be repeated from time to time, a careful control being exercised in the interval. The high titre has been reduced to normal limits. He repeats that this does not mean cure, since this reduction of the titre was attained in the case of several cancer patients, and was accompanied by a constitutional improvement, but the treatment "naturally did not exercise any influence on the carcinomatous process, nor did it arrest the ultimate termination of the disease."

Enterotoxigenic Neuritis.

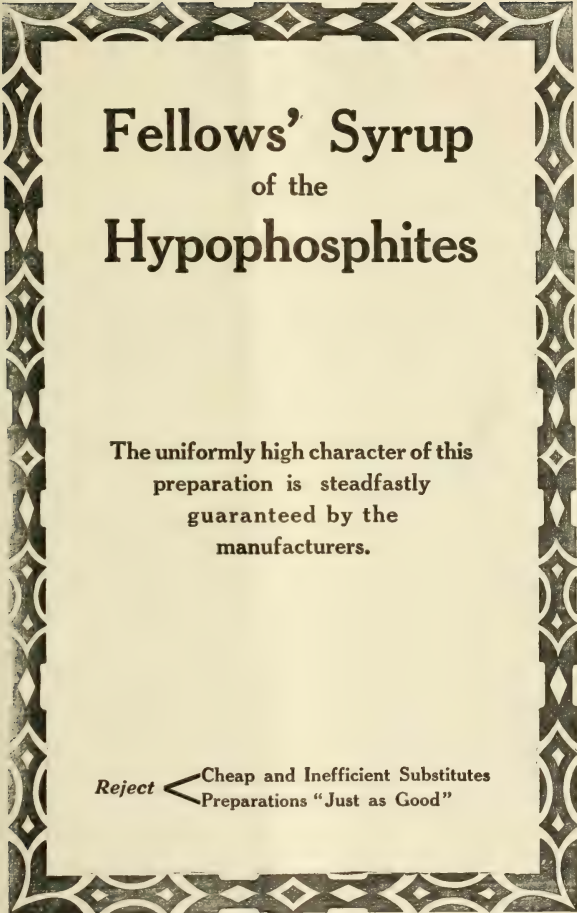
Polyn neuritis of enterotoxigenic origin is discussed as a new symptom-complex by C. von Noorden (Berl. klin. Woch.). There is a group of patients who complain of some irregularity of digestion. Generally there is constipation, or at all events, if the bowels move daily, there is nevertheless a large and constant residue in the sigmoid flexure, giving to sensitive people a sense of permanent fullness of the abdomen, and producing on the left side a point of maximum tenderness similar to the McBurney point of appendicitis on the right side. Very often the trouble is referred to the stomach, and there is found to be a difficulty in emptying of this organ, together with hyperacidity. Pains in various parts of the body next appear, for example in the region of the occipital nerve, or of the trigeminal, or in the arms, or along the sciatic nerve, and

a specially common nerve to be affected is the radial. The neuritis is always of a sensory type, and the pains appear especially in the morning and wear off as the day advances. There is frequently also some interference with the action of the heart in the way of slowing or irregularity of the pulse. A noticeable feature is the reduction in quantity of the urine, with the deposition of a copious sediment, while the connection with intestinal intoxication is demonstrated by the great rise of indican that is excreted. This may be two, three, or four times the normal quantity, and the indol may be combined in part with glycuronic acid, which causes the urine to give a slight reduction of Fehling's solution though no sugar is present. Dr. Eppinger has been able in some of these cases to extract from the faeces a substance which injected into animals produces similar effects, and which on contact with the human skin will produce an urticaria lasting 10 or 15 minutes. This appears to be produced by a bacterium of the paratyphoid group. Another very important symptom is the presence of moderate increases in the variation between the temperature maxima and minima each day, leading often to a diagnosis of early tuberculosis when young people are affected. Other common and erroneous diagnoses of this condition are rheumatism, gout, neuralgia, arthritis, and uric acid diathesis, but the symptoms all disappear so soon as ever the intestine is brought into order.

With regard to treatment no uniform rule can be prescribed, but each case must be studied by itself. Sometimes a diet of milk alone, sometimes buttermilk or yogurth, kefir, etc., is most suitable; in other cases a few days upon sugar-water and nothing else is very beneficial, and some cases do best upon animal diet. Generally it is best to avoid aperients and other drugs, and as a rule two or three weeks suffice to find out and establish a suitable diet for the patient's cure.—Edinburgh Medical Journal.

Gastric Ulcer.

Atropine in gastric ulcer quiets pain and diminishes pyloric spasm. It is especially in the acute cases that the remedy is of service. An injection of $\frac{1}{4}$ mgm. (1.256 grain) should be administered three times the first day, then 1 mgm. (1.64 grain) given in 2 doses on the second day, then $1\frac{1}{2}$ mgm. (1.42 grain) divided in three doses daily for ten to twelve days. Within four to five days the attack is arrested, food is tolerated, the patient regains weight, and conditions are rendered much more favorable for operative intervention. Mathieu and Giraud in the Societe de Therapeutique Paris. Paris, medical.



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Intravenous Ether Anesthesia.

The author describes Rood's apparatus, devised for this purpose. A 5 per cent. solution of ether in normal saline is used. From a reservoir it flows through a glass dripping or indicating chamber, in which the amount of solution used in any given space of time can be observed, next into a warming chamber, heated by water at 100° F., thence into the vein through a rubber tube and cannula. In addition to the usual preparation of the patient, a hypodermic injection of morphine hydrochloride, gr. $\frac{1}{4}$ to $\frac{1}{2}$; atropine sulphate, gr. 1-100, and scopolamine hydrobromide, gr. 1-100, is given about three-quarters of an hour before operation. Complete anesthesia usually requires from three to ten minutes for its induction. The amount flowing in is then reduced to 1 pint or slightly more per hour, to maintain the anesthesia.

The method is specially useful in operations on the head, throat, and neck, as the anesthetist does not encroach on the field of operation. It answers well in cachectic patients generally, and may be employed with advantage in collapsed abdominal cases and in operations attended by surgical shock, such as those for ruptured ectopic gestation, Wertheim's operation, removal of the breast, etc.,—that is, in cases where saline transfusion is beneficial. In a case of the author's in which ileosigmoidostomy was performed there was absolutely no vomiting after the operation, although there had been a great deal of necessary manipulation of the intestine.

The procedure is contraindicated in the alcoholic, plethoric, and muscular type of patient, in cases where there are advanced changes in the vascular and pulmonary systems, and in all cases in which transfusion would increase backward pressure on the right side of the heart.

The advantages of the intravenous over inhalation anesthesia in selected cases are summarized as follows: The patient is spared the disagreeable sensations attending the inhalation anesthesia; there is no primary irritation of the respiratory organs or of the heart; a very small amount of anesthetic is used; anesthesia, when produced, is of a calm and placid nature; there are no after-effects; headache and vomiting practically never occur, and pulmonary complications are absent.—Napier, in the Glasgow Medical Journal.

Stricture of Esophagus.

Referring to the treatment of the fibrous or cicatricial forms of esophageal stricture, the author commends the regular passage of bougies as affording much comfort to the

patient and enabling him to take a much larger variety of food with ease. An oval or Mackenzie bougie is best, the author has had a modification of this instrument made which, by tapering to a point, facilitates its entrance and passage through the stricture. The largest size of bougie that can pass should be used and when passed it should be kept in position at least ten minutes. The procedure should be repeated every other day, using a larger size of bougie if possible on each occasion. When the stenosis has been overcome by the passage of the largest bougie, further regular treatment may cease, but a bougie should be passed at intervals to prevent recurrence.

Where the stenosis is increased by spasm, much help is obtained by the use of the bromides in addition. Thiosinamine was used by the author in several cases of cicatricial stenosis in conjunction with the bougies, being given hypodermically twice a week for some weeks in each case. While sometimes it did not appear to have any appreciable effect, in six cases it was decidedly helpful and in one gave, in combination with the bougies, a most satisfactory result.

Where cicatrices are of syphilitic origin, thorough mercurial inunctions are necessary.

Excision of a simple stricture situated close to the upper end of the gullet should be attempted only where the obstruction is extreme, and will only be successful where the stricture is of very limited extent. Excision of a cicatricial stricture at the cardiac orifice has been successfully performed by means of a preliminary gastrostomy. Where an obstruction is so severe as to interfere with the nutrition of the body, the operation of gastrostomy must be thought of.—Walker Downie, in the Glasgow Medical Journal.

Enterotoxic Neuritis.

Polyneuritis of enterotoxic origin is discussed as a new symptom complex by C. von Noorden (Berl. klin. Woch.). There is a group of patients who complain of some irregularity of digestion. Generally there is constipation, or at all events, if the bowels move daily, there is nevertheless a large and constant residue in the sigmoid flexure, giving to sensitive people a sense of permanent fullness of the abdomen, and producing on the left side a point of maximum tenderness similar to the McBurney point of appendicitis on the right side. Very often the trouble is referred to the stomach, and there is found to be a difficulty in emptying of this organ, together with hyperacidity. Pains in various parts of the body



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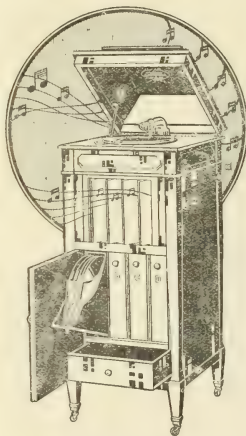
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next appear, for example in the region of the occipital nerve, or of the trigeminal, or in the arms, or along the sciatic nerve, and a specially common nerve to be affected is the radial. The neuritis is always of a sensory type, and the pains appear especially in the morning and wear off as the day advances. There is frequently also some interference with the action of the heart in the way of slowing or irregularity of the pulse. A noticeable feature is the reduction in quantity of the urine, with the deposition of a copious sediment, while the connection with intestinal intoxication is demonstrated by the great rise of indican that is excreted. This may be two, three, or four times the normal quantity, and the indol may be combined in part with glycuronic acid, which causes the urine to give a slight reduction of Fehling's solution though no sugar is present. Dr. Eppinger has been able in some of these cases to extract from the faeces a substance which injected into animals produces similar effects, and which on contact with the human skin will produce an urticaria lasting 10 or 15 minutes. This appears to be produced by a bacterium of the paratyphoid group. Another very important symptom is the presence of moderate increases in the variation between the temperature maxima and minima each day, leading often to a diagnosis of early tuberculosis when young people are affected. Other common and erroneous diagnoses of this condition are rheumatism, gout, neuralgia, arthritis, and uric acid diathesis, but the symptoms all disappear so soon as ever the intestine is brought into order.

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Alopecia.

Six cases of alopecia areata and three of alopecia totalis were treated by the author with the ultraviolet rays. Many of the cases had already undergone tropical treatment with all the usual remedies. The current available being weak, each area was subjected to half an hour's exposure. Good reaction with peeling of the skin followed the exposures, the hyperemia lasting a week as a rule, occasionally longer. The treatment was not repeated until most of

the hyperemia after the preceding exposure had disappeared.

The results obtained included six cures, after treatment ranging in duration from three weeks to thirteen months. One other case, previously quite at a standstill, showed a growth of hair almost as soon as the treatment was commenced. In two cases of alopecia totalis there was no result. In the areata cases it was noticed that the hair usually spread in from the periphery toward the center, so that the space became gradually lessened and finally disappeared.—Delpratt Harris, in *The London Lancet*.

Carbon-Dioxide Snow.

Having ascertained that solid carbon dioxide was soluble or miscible in ether and in absolute alcohol, the author has studied the effects of such a mixture as a stimulating or cauterizing agent in certain skin affections. When carbon dioxide in the solid form, as obtained from a cylinder of compressed liquid carbon dioxide, is added to ether or alcohol, the mixture at first effervesces or boils violently, but after a few seconds, upon further addition of carbon dioxide, a colorless semigelatinous body is obtained. The temperature of solid carbon dioxide is -79°C. , while that of its solution in ether is considerably lower. At this temperature the ether evaporates very slowly, and practically the gas which escapes is the carbon dioxide. For all therapeutic purposes the mixture is what may be considered a preparation of liquid air, but without its unstable character and dangerously low temperature.

The liquid can be applied on a camels' hair brush or with a swab of cotton-wool on a wooden or other non-conducting holder. When it is first painted on the skin, a slight crackling sound is produced, as if the area were being burnt, but no visible fumes are evolved. The area touched is at once frozen, and it can be maintained so as long as desirable by continuous applications.

Only more or less superficial lesions can be dealt with by this method, as it is not possible to exert any great amount of pressure; a certain amount of interrupted pressure can, however, be exerted by applying the remedy on a swab or non-conducting holder for a few seconds at a time. For superfcial lesions, the solution is far superior to former methods because the part under treatment is exposed to view the whole time and the area dealt with, however irregular in outline, can be exactly defined. It is also much less painful than any of the pure acids, slightly less so than the solid stick, and the cosmetic effect is much better. The sensation produced is merely a smarting or pricking one, and the

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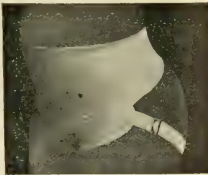
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discomfort ceases shortly after the part is once frozen. The method is also advantageous in that no special apparatus is necessary, a cylinder of compressed liquid carbon dioxide, together with some ether or absolute alcohol and a porcelain dish or watch-glass, being all that is required.

The diseases treated so far were chiefly various forms of lupus vulgaris and ery-



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thematous, rodent ulcers, warts, and other horny growths. The method was found most satisfactory for patches of lupus vulgaris, especially when situated on the face. The interior of the nostrils and any other mucous membrane visible from the exterior could also be conveniently treated. If the mixture is painted on continuously for about a minute, a bleb or blister appears a few hours after. When this ruptures, a superficial ulcerated surface is left, to which small doses of X-rays may be satisfactorily applied during the healing process, and the part dressed with mild antiseptic applications.—Sibley, in *The London Practitioner*.

Neosalvarsan.

The relative toxicity of salvarsan and neosalvarsan to trypanosomes was tested by the authors. Neosalvarsan proved actively parasitidal in dilutions up to 1 in 500,000 in half an hour. Similar experiments made with salvarsan dissolved with the minimum amount of alkali, an amount which would not injure the parasites, showed that in a 1 in 100,000 solution the organisms were still very motile after half an hour. Neosalvarsan was thus shown to be five to ten times more actively parasitidal than the older preparation.

An important advantage of neosalvarsan over salvarsan is the diminished toxicity to human beings. Whereas injections of 0.7, 0.6, and 0.5 Gm. of salvarsan with one day intervals would almost invariably be followed by some toxic symptoms, corresponding doses of neosalvarsan (weighing about one-half again as much) proved usually quite indifferent in the authors' experience. The patients could leave the hospital on the day following the last injection in a perfectly normal or vigorous condition. Patients state that they feel nothing which recalls the fact that anything has been done to them. The authors have seen no symptoms follow the injection of 1.5 Gm. of neosalvarsan excepting diarrhea in some cases, unassociated with malaise. Nausea or vomiting apart from such occurring with the "spirochete fever" was absent. The fever sometimes occurring several hours after an injection of salvarsan, especially in tertiary cases, is still observable after neosalvarsan. The authors consider this as supporting their view that such fever is not an expression of the toxicity of the drug, but is perhaps rather a syphilitic anaphylactic phenomenon comparable to the fever following the injection of old tuberculin.

In general, the importance of neosalvarsan lies in that its diminished toxicity permits of taking another step toward the more frequent attainment of a *therapia magna*, i.e., allows a more intensive treatment of

early syphilis. In primary syphilis, two initial doses may generally be given, followed by a third at an interval of four weeks. In secondary syphilis, three injections will be sufficient at first, with a fourth eight weeks later. In tertiary cases the treatment should be continued every two to three months after the initial course until a negative Wassermann reaction has been obtained.

The effect of the new drug upon the Wassermann appears to be similar to that of salvarsan, i.e., in a case of secondary syphilis a negative reaction (as the reaction is carried out in the laboratory of the authors) may be obtained in from eight to ten weeks after such a course of treatment as that outlined.

Administration of neosalvarsan intramuscularly was tried by the authors, though they lately discontinued using this method. In general the intramuscular injections were less painful than salvarsan injections. The pain was nevertheless severe, though by the next day largely diminished or absent. It was found that a solution of 0.1 Gm. of neosalvarsan injected subcutaneously was practically painless; but it led to necrosis of the subcutaneous tissues, which was prevented from involving the skin by aspiration, and resulted in induration which showed little diminution after three months. Accurate injection into the muscular tissues, however, causes much less induration than in the case of salvarsan, and, further, absorption of the injected mass is much more rapid. This being the case, the advantage of intramuscular over intravenous injections, in the formation of a "depot" of the drug, will be considerably discounted.—McIntosh, Fildes, and Parker, in *The London Lancet*.

Cancer Among Native Africans.

Legrain refers to the extraordinary rarity among the natives of Africa of malignant tumors, particularly of the internal organs. Isolated cutaneous sarcomata appear to be the main form of cancer attacking these people. Benign tumors are fairly common. Europeans resident in Africa show the same incidence of cancer as the inhabitants of Europe.—*Revue Suisse de Medecine*.

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every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

The Diagnosis of Some Common Symptoms in Childhood.

Diagnosis in children rests largely on the result of clinical examination. The general appearance and expression of children who are ill are points which should be studied well. A child's face is frequently a clear index of the severity of the illness, or indeed of the actual complaint from which it is suffering. Small children will often resent examination and the opportunity should be taken of carefully but not too openly noting the general appearance whilst questioning the patient. As examples of points to be gained from a casual inspection I may mention lung disease, the flushed face and working alae nasi of a case of pneumonia, the anxious expression and rather labored breathing of a case of broncho-pneumonia, the sallow complexion and difficult respiration associated with an empyema. The severity of a case of enteritis can be judged by the sunken appearance of the eyes and the fontanelle and the pinched inelastic state of the skin. A peculiar meditative look is seen on the face of the child with tuberculous meningitis and a dull, heavy appearance in typhoid fever or pyelitis. Extreme pallor will suggest a severe infection, diphtheria, rheumatism or one of the anemias of infancy. The pinched, anxious look of the face with perhaps a slight tendency to cyanosis will suggest the severity of an abdominal condition such as peritonitis. The red, crusted eyelids, running nose and blotchy appearance of morbilli, and the puffy eyelids, with perhaps subconjunctival hemorrhages and bloated face of the child with severe pertussis are often met with. The cry of the infant may also assist in coming to a diagnosis, the improperly fed baby has what can only be termed a "hungry cry." Screaming, on the other hand, may be occasioned by colic, brain disease or otitis media. Crying out and handling the limbs apart from local injury or disease may be associated with a general disturbance of nutrition as in rickets or scurvy. The character of the cry is then suggestive, the hoarse voice of laryngitis, the weak wail of the feeble infant, and the gradual loss of voice in diphtheritic laryngitis.

The cough should also be noted, the paroxysmal cough of pertussis, the hoarse barking cry in laryngitis, frequently met with at the onset of morbilli, the short, persistent, often painful cough of pleurisy and pneumonia, and the inability to cough when

the lungs are being choked with secretion as in severe bronchitis. All these points may be made out before proceeding to examine the child, and needless to say the most unpleasant part, looking at the throat is left to the last. It is usually advisable whilst examining the chest to let a small child sit on its mother's lap, and it is often best to listen to the back first, so as not to alarm the child by the sight of the stethoscope, and to accustom it to the feel of the chest piece. It is to be remembered that the apex of the heart in children under four years of age is normally situated in the fourth space and often somewhat outside the nipple line. It has reached the adult position by twelve-fourteen years of age. The pulmonary second sound, as opposed to the case in adult life, is normally rather louder than the aortic. Second examination of the lungs in children is extremely deceptive as regards the physical signs obtained. The breath sounds in small children are usually very distinct and normally rather harsh or "puerile." In comparing the sounds heard on the two sides of the chest, most reliance is to be placed on the "pitch" of the breath sounds, rather than on the doubtful query of prolonged expiration or bronchial breathing which is unaccompanied by any marked impairment of the percussion note. Bronchial breathing may be heard at the apices in quite normal children who are breathing deeply with their mouths open. The abdomen is normally prominent in infants owing to the size of the liver which extends half an inch below the costal margin in the right mammary line, the spleen, however, should not extend beyond the costal margin.

Babinski's sign giving a normal flexor response in the adult, is extensor in children under three; by that age in a healthy infant it should have become flexor. If, however, in premature or ill developed infants who are late in walking, a flexor response is obtained. Thomson states that it is of good omen, because it indicates that cerebral spastic eiplegia is not in process of development and therefore justifies the prediction that such children will ultimately be able to walk.—Kebbell, The London Practitioner.

Bilharzial Disease.

The lesions of bilharzial disease (Glasgow Medical Journal) are described by Professor Ferguson of Cairo, and as the result of extensive observation and experiment several interesting new points are brought out. The disease has been indigenous in the Nile valley from the very earliest times, and from Egypt has probably been carried by infected persons to

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the passing of two body fluids, *in apposite directions, at one and the same time* through an animal membrane. for *nutritional* and *reparative* purposes.

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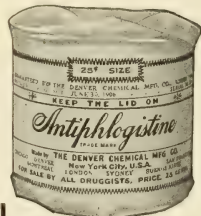
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other parts of the world where it has appeared in more recent years. By a method of digesting pieces of tissue from the bladder, bowel, etc., in 3 per cent. caustic potash solution at 60° to 80° C. and examining the sediment under the microscope the writer found the disease present in 61 per cent. of all males brought to post-mortem examination in Cairo. Further, the ova can be demonstrated in many parts of the body where their presence has not hitherto been suspected, viz., the ovary, lungs, brain, and spinal cord. When ova are set free in the urine or feces the resulting miracidium dies quickly unless it can escape into fresh water. Even in ponds and pools the miracidia live only for thirty-six hours, so that a volume of water becomes again harmless within forty hours of infection. Infection probably takes place through the nasal and perhaps through the genital mucosa. With regard to the position of the spine on the ova both lateral and terminal spines may be found in the bladder and rectum and even upon ova in the oviduct of one worm, so that this character of the ovum depends neither on its species nor on the organ affected.—Edinburgh Medical Journal.

Plato on Contract and Dispensary Practice.

Jollye notes that even in ancient days there were two classes of practitioners who were supposed to treat their patients differently according to whether they were club or private patients, and these two classes of medical men were consequently held in very different esteem by the public. Plato in one of his dialogues refers to the two sorts of doctors as follows: "The slave doctors run about and cure the slaves or wait for them in the dispensaries; practitioners of this sort never talk to their patients individually or let them talk about their own individual complaints. The slave doctor prescribes what mere experience suggests, as if he had exact knowledge, and when he has given his orders like a tyrant, he makes off with equal assurance to some other servant who is ill, and so he relieves the master of the house of the care of his invalid slaves. But the other doctor, who is a freeman, attends and practices upon freemen: he carries his inquiries far back, and goes into the nature of the disorder; he enters into discourse with the patient and with his friends, thus at the same time getting information from the sick man and also instructing him as far as he is able, and he will not prescribe for him until he has first convinced him; at last, when he has more and more brought the patient under his persuasive influence, and set him on the road to health, he attempts to effect a cure.

Now which is the better way of proceeding in a physician and a trainer? Is he better who accomplishes his end in a double way, or he who works in one way, and that the rude and inferior?"—The London Lancet.

Alcohol and Disease.

One of the most significant facts of modern therapeutics and social economics is the changed attitude of the medical profession concerning the use of alcohol in disease. Regarded merely as a beverage in health, there will always remain differences of opinion, but there can be no doubt whatever that alcohol does not hold the same place in the pharmacopeia as it once did. Hospital staffs no longer order the daily quantities of beer, wine or spirits to their patients that were customary a generation ago. In fact with the general wave of temperance that has undoubtedly swept over the country, owing to changed habits on the part of the people, has come a reluctance to employ a substance the administration of which was felt to carry with it certain risks. It is interesting, therefore, to note that at the recent breakfast held at Liverpool under the auspices of the National Temperance League, the two principal medical speakers, Sir James Barr and Professor F. W. Mott, were neither of them total abstainers. Both recognized fully that too much alcohol was consumed at the present day, but both acknowledged that a great advance had been made in the direction of temperance. Both, again, stated that they did not order alcohol in disease except in small quantities or in exceptional cases. Such testimony from unbiased practicing physicians is in itself a striking confirmation of modern experimental research into the action of alcohol upon the physical and mental economy. It seems likely, therefore, that the administration of alcohol in sickness will be yet more scientifically conducted in the future, having due regard to its limitations and drawbacks.—Canadian Practitioner and Review.

Recent Result of Research in Tropical Medicine.

Hoffmann in the Berliner Klin. Wochenschrift mentions first the spirochetotropic action of salvarsan to frambesia, relapsing fever, and *ulcus tropicum*. In all of these affections the new remedy exerts the same brilliant specific action as to syphilis. The affection known as venereal granuloma, a new venereal disease studied in South America, has been found to show noteworthy analogists to rhinoscleroma. The cause is not a spirochete, as has been claimed, and salvarsan has entirely failed to cure or



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favorably affect the disease. The affection known as parasitic thyreoditis has been found to be due to a trypanosome for which the big bed-bug or conorhinus acts as host. The affection has therefore been styled coreotrypanosis (kopsis-bed-bug). Much work has been done in the comparatively new field of the leishmaniasis. It has been learned that the so-called pian boil or Surinam yaws, being regarded as frambesia is due to a leishmania introduced by a tick and hence is a congener of the Aleppo boil. Pellagra now seems to be attributable to a simulium or sandfly which acts as host for an unknown micro-organism. The food theory has almost been abandoned. A similar etiology is being agitated for beriberi, although insufficient diet may furnish the predisposition if not the actual causation. *Verrinea peruviana* makes one more dangerous disease to be traced to an insect or tick host. The latter is not yet known but is evidently one of nocturnal habits. We now know that this affection may occur in a human form. The incubation period is three weeks. The actual cause is doubtless a hematozoa. Variola is now fully recognized as a perennial disease in certain regions of the tropics and one which slays an immense number of people. A stable vaccine is indispensable and any detail of technique which will assist in preserving the same will protect in direct proportion to the degree of presentation. The lepra bacillus has been freely cultivated and is seen to be a streptothrix. As far as the bubonic form of the plague is concerned it is certain that it is exclusively flea borne. No flea, no plague. The anti-rat crusade, it is to be feared, is ineffective in stamping out the disease as a whole, although a useful resource. One should not rest content with rat killing. The best prophylactic is prompt recognition and isolation of the first cases, because flies quickly spread the disease from man to man.—Indian Medical Record.

The Diagnosis of Smallpox.

Some very useful practical points on the infective fevers are epitomized by Dr. Meredith Young in the Practitioner. On the importance of exact diagnosis in respect to smallpox he especially insists, because a single failure may involve an epidemic and a serious cost in life and money. If an eruption persists without appreciable alteration for three or four days, it is hardly ever variolous. Thus, *peliosis rheumatica*, lichen, and pustular syphilides can usually be excluded. On the other hand, the sudden onset of headache, slight pyrexia, and pain in the loins or sacrum, lasting for two days and disappearing when an eruption,

however atypical or slight, appears, may safely be put down to smallpox; the eruption may consist of only a single spot, yet the case may be one of variola. It is the exception rather than the rule for severe prodromal symptoms to be followed by a copious eruption. Again, after suspicious symptoms of invasion, the appearance of an eruption upon the pharynx, palate, tongue, or conjunctiva, as well as upon the body, usually points to smallpox.

The most important characteristic of chickenpox is the unilocular vesicle, which empties completely when pricked with a needle. Next in importance is the fact that fully-formed vesicles are visible within twenty-four hours (often earlier still) of the preliminary indisposition, which may be extremely slight. Successive crops of eruption are common in chicken-pox, so that papules, vesicles, pustules, and crusts may all co-exist. In smallpox, it is true, the rash appears earlier on the face and hands than on the body and lower limbs; but lesions in quite different stages of development are never seen. Umbilication of the vesicle, a feature of the true smallpox vesicles, is sometimes present in chickenpox, but only when the vesicle has been ruptured or has arisen round a hair. In chickenpox there is no alleviation of malaise when the rash comes out. The combination of lumbago with influenza may cause suspicions of smallpox; the only thing to be done is to await the eruption. The presence of pre-eruptive morbilliform, scarlatiniform, or hæmorrhagic rashes settles the point at once. The pre-eruptive rashes often give rise to mistakes and difficulties. The "triangular" rash of tiny petechiæ on a reddened skin, with the apex at the pubes and the base at the umbilicus, is absolutely characteristic of smallpox. Another pathognomonic rash is one formed of mingled large and small petechiæ filling Scarpa's triangle or, more rarely, a triangular space in the axilla. If either of these rashes is followed by bleeding from the nose, bowel, kidney, or uterus, the case is hæmorrhagic smallpox, and death will ensue about the third day.

After dealing with other sources of error, Dr. Young states that in rare cases a resort to vaccination may be the only means of clearing up the diagnosis. The physician should frankly avow his difficulty when proposing this test. A single negative result should not be regarded as final, if an eruption is actually present on the skin; several attempts should be made. Also a typical vaccinia pustule may not appear, in the same circumstances. The method is only applicable, naturally, to those previ-

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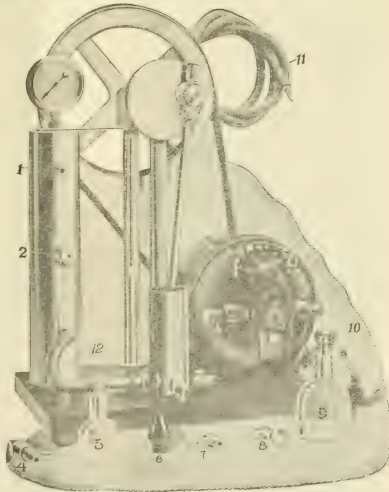
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SOUTHERN MEDICAL SOCIETIES



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Annual Meeting at New Orleans, La.
October, 1913.

Henry Enos Tuley, M. D., Sec'y.,
705 S. Third St., Louisville, Ky.

Albert E. Sterne, M. D., Pres., Indianapolis.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Old Point Comfort, Va.
December, 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.

Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Mobile, Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.

R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.
W. T. Wootton, M. D., Pres.,

Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Orlando, Florida,
May, 13, 1914.

J. D. Fernandez, M.D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Baton Rouge, La. 1913.

Joseph D. Martin, M. D., Sec.,
141 Elk Place, New Orleans, La.

B. A. Ledbetter, M. D., Pres. New
Orleans La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Vicksburg, Miss., 1913.
Date not yet decided.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

S. W. Glass, M. D., Pres., Dublin, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

L. S. Peters, M. D. Pres. Silver, City N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

Edgar A. Hines, M. D., Sec., Seneca, S. C.
W. M. Weston, M. D., Pres.,

Columbia, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Memphis, Tenn.,
April 7-9, 1914.

Perry Bromberg, M. D., Sec.,
315 Jackson Bldg., Nashville, Tenn

W.D.Haggard, M.D., Pres. Nashville, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Lynchburg, Va.
Oct, 1914.

P. A. Irving, M. D., Sec.,
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Southgate Leigh, M. D., Pres.
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VOLUME 68
NUMBER 5

Charlotte, N. C., November, 1913.

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Table of Contents, Page 351

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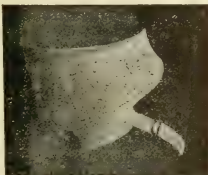
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Medical Society of the State of North Carolina meets in Raleigh, June, 16, 1914.

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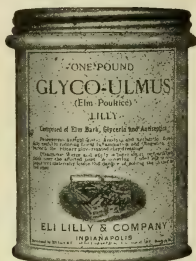
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Secretary of the Council on Pharmacy and Chemistry
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FACTS

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Fourth.—That the digitalis next in strength to the Mulford preparation, was only 65 per cent, and the weakest, 29 per cent in activity.

CONCLUSIONS

While there is no official standard of activity for digitalis, Dr. Hatcher adopted the Mulford Fluidextract Digitalis as the standard of comparison, because its activity was that of a good digitalis. The report proves the activity and reliability of the Mulford Digitalis, and coincides with the former report made by the United States Bureau of Hygiene, tabulated in Bulletin No. 48, December, 1908, by Edmunds and Hale, relating to the Mulford Fat-free Tincture of Digitalis—**Digitol**.

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DOSE—5 to 10 drops, in two tablespoonfuls of water, before each meal.

We ask a trial of the Iowna Tonic at our expense, as we guarantee it to be a marked advance upon our Freligh's Tonic, doing all the Freligh's Tonic will do and more.

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A teaspoonful contains	{	Cystogen	gr. V.
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DOSE: One to three teaspoonfuls in a glass of water t. i. d.

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The Charlotte Medical Journal

VOL. LXVIII

CHARLOTTE, N. C., NOVEMBER, 1913.

No. 5.

Keep the Race Pure—Eugenic Marriages.

By Charles V. Carrington, M.D., Richmond, Va.

I have chosen as the subject for my paper tonight, Eugenic Marriages. I do this with the earnest hope that a full discussion of every phase of this great movement may follow.

Keep the Race Pure—let that be our text and watchword. If this generation of physicians will meet the issue fairly and squarely and lend their every effort, in season and out of season, to the education and enlightenment of the public on the great good and blessing that would come to humanity as a result of Personal Purity—with the resultant Race Purity—the next thirty years A.D. would be the greatest period in the history of the ages.

Physicians as a class are always self-sacrificing and unselfish in their efforts to benefit humanity. The last thirty years have been literally full to overflowing with the beneficent results of their work. It would not be proper in this paper and discussion to dwell on the inestimable benefits to mankind that have resulted from antiseptics, diphtheria and typhoid antitoxins, salvarsan, and the hosts of other serum antitoxins and phylacogens. We physicians all know of the insidious ravages of syphilis. We know that a confirmed epileptic, an insane person, a feeble minded individual should not marry and beget children. We all know that the curse to the third and fourth generation is sure to follow. We have God's word for it. And still we, most of us, sit by and will not raise our hand or voice to help forward the great movement for Race Purity.

It is always most striking to bring these matters home to our own people, here in Virginia. There was a time, fifty or sixty years ago, when one person in every thirty-five hundred was a criminal, that is, was caught in some wrong doing and sent to the penitentiary or to jail. Now, in 1913, one in every four hundred and eighty goes to jail—over ten thousand feeble minded persons are living and some of them right now reproducing their same species in Virginia. Our insane asylums, for whites and blacks, are full and over crowded. Just on the outskirts of your own city—Lynchburg—is being established an institution for the care and treatment of confirmed epileptics, a splendid work and in most capable hands.

Before the war, fifty years ago, an insane negro was an unknown quantity in Vir-

ginia. Now we have over two thousand of these poor creatures in the colored asylum in Petersburg. And so we might almost unendingly enumerate the evidences of Race Impurity. We physicians all know these things to be true, and now it behooves us to not only "stop" and "listen," but by a great and united effort on our part, inaugurate and carry through a campaign of Education on Race Purity. It is all very well and certainly most proper for the Clergy to go to the fountain head of this matter and say that they will not marry parties who have a communicable disease of immoral origin but it comes right back to us, the physicians, to give the certificate—clean or unclean.

Everything, every movement has to have a beginning, and their decision not to marry people having a communicable disease of immoral origin is a splendid idea as far as it goes, and we physicians should unhesitatingly do everything in our power to aid in this movement—but in time it should be possible to forbid the issuance of a license to any person having a *communicable disease*, no matter of what origin. That takes in everything, from diseases of personal immoral origin to diseases of inheritance. Then, and only then, will we begin to stem the tide of criminal degenerate, feeble minded, epileptic and insane, which is so surely polluting and threatening extermination of our race.

The double standard of virtue, which men for ages have arrogated to themselves, is sinfully, cruelly wrong. Caesar's wife must be above suspicion, but Caesar can be, and often is, a black-hearted, unclean, lecherous scoundrel who, in entering the holy bonds of matrimony, prepares to scatter, to even the third and fourth generation, the whirlwind of disease, suffering and sorrow, which his descendants must reap because, perchance, under this same double standard of virtue, "he has had his fling in the fresh keen hour of youth." Holy matrimony is an honorable estate, instituted by God in the time of man's innocence. The first marriages on earth were theoretically and actually eugenic marriages, that is to say, the contracting parties were actually without mental, physical or moral taint. When sin entered into the world and the expulsion from the Garden of Eden followed, and on the heels of this exodus came the elevation of the double standard of virtue for men to live under, then slowly but

surely, through the ages, race deterioration ensued. Of course, no one is able to say at what date epilepsy, feeble mindedness, insanity, pus tubes, ophthalmia neonatorum and degeneracy in its varied forms became established as the heritage of the human race, but it is pitifully and solemnly true that all this, and more, is our heritage in direct ratio as our fathers and forefathers lead exemplary or immoral lives. Heredity is a fearful, non-get-away-from proposition, and God grant that we of this generation give our utmost efforts to the betterment of this, our generation, so that succeeding generations may rise up and call us blessed; for it is assuredly a fact that you can as certainly *out-breed* epilepsy, feeble mindedness and degeneracy in all its forms, as you and your forebears could *in-breed* them.

One little entering wedge has been driven by which a ray of illuminating light may enter this dark and undiscussable subject, by the public action of the Episcopal Diocesan Council of Virginia, when last spring in open session they passed the following resolution:

"Resolved, That it is the sense of this Council, that for the sake of the protection of women and for a higher appeal to men, it is desirable that ministers of this diocese, as rapidly as they can secure such co-operation from the physicians of their several communities, as shall satisfy them that their position will be effective, either by themselves or in conjunction with ministers of other churches, shall declare their determination to perform the marriage service of the church only when the man to be married shall secure from the family physician of his intended bride, or from some other physician certified to by the bride's physician, a certificate of his freedom from communicable disease of immoral origin."

This is an epoch-making resolution. Patrick Henry's fiery appeal uttered more than a century ago in old St. John's Church in Richmond "Give me liberty or give me death" is hardly "a marker" compared to the far-reaching effects of this calm, deliberate resolution of a distinguished body of clergymen and laymen.

I said this resolution was an entering wedge—it is in truth an entering wedge—and such a wedge as will split asunder this double standard of virtue for men only; but this wedge can only be driven home by the united efforts of all good men and fathers, without regard to denomination, sect or citizenship.

I can very well see how some good men and fathers differ in opinion as to the proper methods for carrying out the *spirit* of this resolution, but for the sake of long-suffering womankind and the relief and better-

ment of the condition of the unborn generations, if you cannot suggest some better resolution to fight under, don't meet this gravest of situations with levity and lies.

Very recently I heard a physician, an old man, too, say that "No harm came from moral uncleanness, provided you took reasonable precautions, and that *moral uncleanness was a necessity for men.*" There is not one scintilla of truth in either of these degrading statements; they are both of them contemptible lies, out of the whole cloth. One feels like apologizing for using strong English, but none of Shakespeare's seven definitions of what is a falsehood fits the crime. You must meet such false and degrading statements with a stiff right-handed "Liar" from the shoulder—especially when, who can say, that just such speech and doctrine might reach the ears and be acted on by your now pure and innocent boy entering his teens.

To the end that this resolution of the Episcopal Diocesan Council of Virginia might become effective, certain Episcopal ministers in Richmond, thirteen in number, after due consideration have given full notice to the public that on and after October 1st, 1913:

"We, whose names are signed below, holding the ideal of purity to be of right as sovereign for men as it is for women:

"Recognizing that the finest men in every rank and calling honor this ideal, but deeply moved by the contrasting fact of that ignoble tolerance among too many which ignores this single standard, and condones in men a carelessness in morals which every chivalrous instinct should condemn;

"Knowing that immorality in men leads to physical diseases;

"And knowing, further, that these diseases are often transmitted to the women, who, in innocence and purity, marry men whose lives have thus been tainted, as the shocking facts to which physicians and surgeons in this city, as in other places, will testify, give proof;

"Therefore, in order that we may do our utmost to prevent these physical tragedies, and further, that we may lift up the standard of a new crusade against the shame of that indifference to personal purity among men which makes these tragedies possible;

"We are resolved that after October 1, 1913, we will perform the marriage services of our respective churches only when the man to be married shall have secured from the family physician of his intended bride, or from some other physician certified to by the bride's physician, a certificate of his freedom from a communicable disease of an immoral origin.

"And we call upon all fathers and moth-

ers to interpret aright and to support this position we shall occupy; and especially do we summon all that great number of men to whom, because of their pure lives, the requirement we have outlined might seem a needless inconvenience, to bring the power of their unselfish co-operation to the side of this endeavor to make more commendable the ideal of purity for all."

Another epoch-making resolution, and God grant that, having put their hand to the plow, they do not turn back.

No one dreams that these resolutions will be lived up to, to the letter; they cannot be, in the nature of things—"All men are liars and desperately wicked—at times," but they have a teaching, enlightening effect and will be powerfully deterrent on the young man contemplating leading a pure young girl to the altar.

Some of our good men and fathers say that the State should regulate such matters. Good! I for one firmly believe in State regulation, and it will come in time, but I also believe in church education, and church education, backed up by all good men, fathers and physicians, should begin right now, and in time, just as light follows darkness, our legislature will see the light and enact proper laws for carrying out the spirit of these two splendid resolutions.

In hearing doctors discuss this movement, one said it was offensively inquisitorial and much too expensive to be put into full operation. The answer to this is very easy: A pure man does not and will not fear inspection and interrogation; a diseased man should be discovered and cured, for his own sake if not for the sake of the girl he doubtless loves to the limit of his ability, and then, when cured, a proper certificate would be readily forthcoming. Ah! But the kicker says, look at the expense. I would reply "The way of the transgressor is hard." "The wages of sin is death." If the transgressor does not choose to pay the bill, then do not let him inflict death, and worse than death, on the innocent party to the proposed marriage contract. When the last word is said, the matter of expense is trivial. From two to five dollars would cover any ordinary examination of an honest man. Any suspicious case requiring blood examination could be thoroughly and completely examined for ten dollars.

I have called these resolutions entering wedges; they simply attempt to deal with communicable disease of immoral origin—that is a big enough proposition as an entering wedge. The real eugenic marriage would mean not only singling out the cases coming within the scope of the resolutions, but all mental, moral and physical imperfections would debar a candidate.

I bespeak your earnest and careful consideration of what I have said, and beg the assistance of all good men, fathers and physicians to the carrying out of the spirit of these two resolutions in your several communities.

In closing, let me give you a thought from the brain and pen of that genius, Ella Wheeler Wilcox, entitled "The Price He Paid."

THE PRICE HE PAID.

I said I would have my fling,
And do what a young man may;
And I didn't believe a thing
That the parsons have to say.
I didn't believe in a God
That gives us blood like fire,
Then flings us into hell because
We answer the call of desire.

And I said: "Religion is rot,
And the laws of the world are nil:
For the bad man is he who is caught
And cannot pay his bill,
And there is no place called hell;
And heaven is only a truth,
When a man has his way with a maid.
In the fresh, keen hour of youth."

And money can buy us grace,
If it rings on the plate of the church
And money can neatly erase,
Each sign of a sinful smirch."

For I saw men everywhere,
Hotfooting the road of vice;
And women and preachers smiled on them
As long as they paid the price.

So I had my joy of life:
I went the pace of the town;
And then I took me a wife,
And started to settle down.
I had gold enough and to spare
For all the simple joys
That belong with a house and a home
And a brood of girls and boys.

I married a girl with health
And virtue and spotless fame.
I gave in exchange my wealth
And a proud old family name.
And I gave her the love of a heart
Grown sated and sick of sin!
My deal with the devil was all cleaned up,
And the last bill handed in.

She was going to bring me a child,
And when in labor she cried,
With love and fear I was wild—
But now I wish she had died.
For the son she bore me was blind
And crippled and weak and sore?
And his mother was left a wreck.
It was so she settled my score.

I said I must have my fling,
And they knew the path I would go;
Yet no one told me a thing
Of what I needed to know.
Folks talk too much of a soul
From heavenly joys debarred—
And not enough of the babes unborn,
By the sins of their fathers scarred.

Consideration of Gonorrhea in the Female.*

By Parran Jarboe, M.D., Urologist and Genito-Urinary Surgeon to St. Leo's Hospital, Greensboro, N. C.

My idea in bringing this subject before you today for consideration is because of the frequency of gonorrhea in the female, beyond the realization of those who give the subject little thought. The percentage figures of infection by the gonococcus are so at variance that I shall not attempt to say what proportion of females become diseased by this organism, suffice it to say that no period or walk of life is immune and the hospital records show that 90 per cent. of all operations on the female are traceable directly or indirectly to the gonorrhœal germ. There probably is no other infection that taxes the skill and judgment of the practitioner as gonorrhœa in the female, and while in a general way it is the same as in man still many new factors enter into consideration in the female, by reason of the anatomical difference in the genito-urinary organs. The more extensiveness of the mucous surfaces that may become involved, with its many intricate folds rich in glandular tissue, lend difficulties that are at times difficult to surmount. The condition is complicated all the more by the social status of women, shame, ignorance or indifference preventing them from submitting to proper treatment. It is with great difficulty that we are able to get them to appreciate the importance of following up treatment until they are cured, an unfortunate circumstance which is responsible for the vast number of uncured and untreated cases that become carriers and prolific disseminators of this disease. The gonococcus has a peculiar affinity for cylindrical epithelium, therefore we find it habitating those portions of the genito-urinary tract that have this particular variety almost to the exclusion of any other, and it is to this selective action that we ascribe the frequent localization of gonorrhœal infections. It is well agreed that the points of attack in order of their frequency is the urethra, cervical canal, ducts of Bartholins glands, uterus, tubes, vulva, vagina, bladder and rectum. The glands of Skene at the mouth of the urethra are lined with cylindrical epithelium, the urethra itself being lined with pavement epithelium, but contains numerous crypts which are lined with cylindrical epithelium; these are analogous to Littre's glands in the male urethra and make an ideal habitat for the gonococcus. Cylindrical epithelium also lines the Nabothian gland ducts of the

cervix, as well as Bartholins glands, while the vulva, vagina and portion of the cervix within the vagina are covered with pavement epithelium and are rarely ever affected, being also protected by the natural acid secretion of the vagina made so by the lactic acid secretion of the Doederleins bacillus, a condition vastly unfavorable to the growth of the gonococcus. In acute affections the urethra is almost universally involved and generally associated with a cervicitis. I have rarely failed to demonstrate the organism from the urethra, especially if it was obtainable from any other point. In regard to the virility of the gonococcus I quote the following from Doederlein, which is based upon his tremendous clinical experience: "A wide patulous external urethral orifice in the male favors the entrance of the female secretion, so that one with such an urethral orifice may acquire gonorrhœa while another—later comer—may not acquire it. Likewise in the female the anatomical conformation of the genitalia has an influence on the kind of gonorrhœal infection. With a narrow vaginal outlet—virginal—the urethra is likely to become infected first, and in a non-virginal vagina the infecting agent more easily comes in contact with the upper part of the vagina and cervix. An infection with acute gonorrhœal pus causes in woman a much more acute stormy attack of ascending gonorrhœa than an affection with chronic latent gonorrhœa. In labor the gonococci in the lochia become more virulent which favors an ascending infection. In marriage the two participants may become immune to each others gonococci, so that it is not possible to have a further exacerbation of gonorrhœa between these two. When a third person trespasses, however, it is possible that he may have an acute attack of gonorrhœa while neither the man nor the woman have any manifest symptoms. Not every connection with a gonorrhœic woman is followed by an infection, because in chronic gonorrhœa the genital secretions can be at times free of gonococci. Marked irritation of the genital tract as from menstrual or puerperal secretions bring the gonococci to the surface and raise the infectiousness of the woman. Under these conditions the symptomless gonorrhœa of man can experience a recrudescence and the man can, through his wife, be infected with a virulent gonorrhœa. In man symptomless yet infectious gonorrhœa, through excesses, especially those venereal, experience exacerbations and appear after a pause of perhaps ten or twenty years."

The diagnosis of gonorrhœa in the female is not always easy, particularly after it has passed into the chronic stage, the clinical

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manifestations depending upon whether the infection is simple or mixed with other pyogenic organisms, the virulence of the infecting gonococcus and the resistance of the tissues invaded. In acute conditions the symptoms are fairly constant, the profuse burning discharge and the difficult burning micturition at once suggest a possible gonorrhoeal involvement, a history of exposure to any of the usual modes of infection will tend to strengthen our suspicions. A sense of fullness and weight in the groins, lower part of the back and about the vulva are further objective symptoms.

If the infection is low down and involves the Bartholin glands, as we so often see it, especially in children, there will be tumefaction about the outlet that makes walking very painful.

The urethral opening is reddened, swollen, and congested, the mucosa bulging at the orifice, and pus oozing therefrom.

Palpation through the vagina gives acute tenderness all along the urethra which is thickened and indurated, the cervix usually, being found in the same condition, and smears made from these two points should show the gonococci.

The diagnosis of subacute or chronic gonorrhoea is beset with difficulties and only in a small percentage of cases can the gonococci be demonstrated. Frequency of urination is the most constant symptom, this is more noticeable when the patient is on her feet a great deal, induration of the urethra with pus appearing at the opening after massaging through the vagina is one of the most reliable symptoms and this secretion will be found to contain the gonococci more constantly than from any other point. The orifice of Skene's glands are thickened and everted and pus can be expressed through their ducts and will usually show the gonococcus; the same may be true of Bartholin's glands. Erosion of the cervix with a mucopurulent discharge is usually to be found.

Recently the complement fixation test as developed by Schwartz and McNeil has rendered valuable aid in clearing up some of these obscure conditions.

In treating the acute cases the patient should be put to bed and our treatment aimed at preventing an ascending infection and elimination of the gonococci.

I order a hot boric acid douche every three hours, which removes the pus and cocci without injuring the epithelium. This is given through a soft rubber catheter and not the ordinary irrigation nozzle.

Liquid diet only is allowed and the bowels kept open with salines. Between the irrigations the fourchette, urethral orifice and exposed genitals are swabbed with a 10% glycerite of ichthyol and argyrol. A hot

water bag over the pubes or to the vulva will often give relief to the burning and inflammatory irritation that is exceedingly gratifying both to the patient and physician.

After the acute symptoms have subsided the douches are changed to 1-500 protargol solution and the urethra painted through the endoscope with the ichthyol-argyrol solution; and the cervix with silver nitrate solution daily.

Internal medication is given according to conditions and indications. The treatment of chronic gonorrhoea in the female offers great obstacles and many difficulties, by reason of the great number of complications which this condition entails, suffice it to say that we should carefully search for all diseased areas and apply to them both careful and diligent local treatment, being cautious not to over-treat them in our zealousness. We may find the infection all along the urethra in the ducts of Skene and Bartholin's glands, cervical and endocervical tissue, vagina and parts above the cervix.

Nitrate of silver is undoubtedly the drug of preference and can be used in fairly strong solutions in these chronic conditions; where there is a cystitis protargol is better tolerated. I have lately treated two cases with ichthyol irrigations of the bladder with pleasing results.

Where there is uterine involvement and adnexal disease appropriate surgical measures should be applied, after the acute symptoms of these complications have subsided. This law, as unerring as it may be, is unfortunately often transgressed in our eagerness to operate, either by the surgically bold or the uninformed, and pus tubes, uterus or whatnot removed during the acute inflammatory condition, adding imminent danger if not fatal results to our patient.

The bacterins and anti-gonococcic serums are much praised by some in treating these chronic cases. I have used them long and often and must say that the results have been disappointing.

In conclusion, the one point that I would like to impress upon you is that the sooner we get an acute infection under proper treatment the better for the patient, doctor, and society at large.

121 South Elm Street.

The Social Drink, a Menace to Civilization.

By B. C. Keister, A.M., M.D., Roanoke, Virginia.

As conservators of the public health and benefactors of mankind, it behooves the Medical Profession to take the initiatory steps in the matter of educating public sentiment along the line of Preventive Medicine. In this broad field no greater opportunities for scientific investigation have been pre-

sented to the profession than the "Drink problem," and the dangers to both body and mind that lurk around the so-called "social glass."

During the past ten years patient and honest men, seeking after the truth, have investigated with scientific accuracy the physiological effects of alcohol upon the human organism. Many of the older theories and false teachings have been exposed, disproven and discarded. We now have the effects of alcohol upon a scientific basis. Its effects upon vital resistance, upon the phagocytic power of leucocytes, upon heat production, digestion, the heart's action, blood pressure, the kidneys, the liver, the brain and nervous system have all been carefully studied by many of the most scientific observers, all of whom have arrived at practically the same conclusion, namely: "*That alcohol is a narcotic poison,*" and should be classed with such drugs as chloroform, ether, chloral, etc. Alcohol, like ether, has a two-fold action, (1) temporarily exhilarant, for a short time; (2) depressant, for a much longer time. Like chloral, the temporary stage of exhilaration is followed, more or less rapidly according to the amount taken, by a stage of sleepiness or actual insensibility which lasts longer than the stage of excitement. For instance, if only a small quantity of ether or chloroform be inhaled or taken, there is a pleasant feeling of warmth and a sensation of vigor, followed later by drowsiness and a desire to sleep. If taken in larger quantities there is a short stage of exhilaration, talkativeness, babbling, etc., which is followed by complete loss of mental control; the bodily temperature is lowered and a stage of deep sleep and loss of power to move or feel ensues. Alcohol acts in precisely the same way. (Horsely).

Recent investigation clearly disproves the old theory of alcohol being a true heart stimulant. It no longer lays any claim to its supposed power of augmenting the heart's action, but, on the contrary, it slowly depresses the action of the heart muscle and ultimately paralyzes both the muscle and the delicate nerves of this organ. This paralysis of the cardiac nerves largely accounts for the acute dilatation and sudden failure of the heart in persons who have taken large quantities of alcoholic drinks.

The common practice of administering some form of alcoholic beverage as a restorative in cases of fainting (syncope) is contra-indicated, and the delusion should be corrected. This rule applies with even greater force to cases of shock. Recent investigations have shown that alcohol administered in any form aggravates the conditions resulting from shock. (Crile).

About four-fifths of the best hospitals of Europe and this country have abandoned the use of alcohol as a medicine, except as a local application in sprains, etc.

The temporary exhilaration and excitement of the nervous system following the internal use of alcoholic beverages misled our forefathers into the false belief that these conditions were caused by a stimulating action of the alcohol. The fact of our impressions on the supposed stimulating action of alcohol are false and deceptive, is of very great importance to us in endeavoring to understand how a substance which paralyzes like alcohol can at the same time act as a stimulant. As previously intimated, chloral, chloroform, etc., may cause a temporary sense of stimulation, exhilaration or excitement which are sought after by the victims of morphia and alcohol alike. It is this exhilarating or so-called stimulating (?) feeling that causes men and women to become victims of strong drink and its pathological consequences. Then for the sake of humanity, as well as for correct and scientific phraseology, let us adopt for alcoholic *stimulants* the more appropriate term—*alcoholic narcotics*.

Now since we have accomplished the great task of classifying alcohol, and placing it in its proper position with other narcotic poisons from a physiological standpoint, let us with equal energy study and consider it from a psychological point of view. Ancient and ignorant people used alcohol because they liked the exhilarating effects of it, regardless of the pathological results. Later it was used in religious rites, and for some two thousand years it had defenders who took the ground that the Creator would not have made it and given His children an appetite for it unless it were good. Strange as it may seem, we have many such advocates in this the twentieth century, in both Church and State, whose judgments are biased, not only by monetary interests, but by their special liking for the exhilarating effects it has upon their mentality.

A general awakening has at last dawned upon our country. It is observed as a settled fact that no other agency in the realm of civilization is contributing so much to the increase of disease, poverty, crime and mental agony as alcohol. It keeps the asylums, prisons and alms-houses filled with victims. Not a man, woman or child in all the world, of high or low ancestry, but has felt the sting of this poison, either directly through near relatives and loved ones, or indirectly through dear friends.

The Medical Profession has learned much of alcohol in recent years, but, strange to say, it has not given the public the benefit

of this knowledge. Physicians have steadily diminished the use of it in hospitals, sanitariums and private practice, until it has become almost obsolete as an internal remedy; but still the public has continued to judge the medical profession's attitude toward alcohol by the large amount prescribed in the past, as well as by what it sees of the doctor's habits at the Club and at the banquet table. Hence, so far as the public knows, alcohol is still approved and prescribed by the medical profession. It is time that the public should be set straight on this important matter, and if we cannot agree to cast it out entirely from our pharmacopœia, much good would come if the public could be informed that alcohol is but rarely used as an internal medicine by up-to-date physicians. The practical layman will not fail to comprehend the meaning when we tell him that within the last twenty five years the medical use of alcohol has decreased more than seventy-five per cent., and at this rate it will be only a short time when he will see its complete elimination from our medical dispensatory.

Let the honorable faculties of our medical colleges take decided steps in excluding its use from the hospitals with which they are connected, and also denounce it as a remedial agent in their lectures to the student body. These are among the fountain sources from which a large number of our medical colleagues, in years gone by, drank in the false theories on the subject, hence so much confusion in the matter of the careless prescribing of alcohol as a medicine, unconsciously making drunkards of a large percentage of their patients. Sad and shameful as it may seem, many of our medical brethren, some of whom were shining lights in the profession and bade fair to reach the topmost rung of the ladder of fame, started on the drunkard's path during their course at Medical College. And in the recent past it was no uncommon thing to see these men at the annual meetings of our State and National Medical Associations enjoying their usual banquet carousals.

It is with feelings of sadness that the writer recalls an instance of this kind who was a friend and consultant, and died only a few years ago from alcoholic paralysis. With the exception of his weakness for strong drink, he was a model man and physician. He graduated at one of the leading Medical Colleges of this country, and was honored after his graduation with an internship at Bellevue Hospital, New York. It was during his medical course and service as interne that he began the use of *soft drinks*, and gradually tapered up to stronger drinks. He was a man of fine physique

and prepossessing appearance, and belonged to one of the best families of his State. He built up a lucrative practice among the most substantial families of his town, notwithstanding his periodical sprees. He never failed to attend the annual meetings of his State Medical Society, and always took an active part in the discussions until the first banquet supper, after which he was never seen outside of his hotel room, nor was he seen back at his home until about two weeks after the adjournment of the Society. This is only one out of the many similar instances observed, and I don't doubt but every member of this Society could cite cases of a similar nature. In view of these facts would it not be a commendable idea, and within the bounds of discretion on the part of this Society, to pass a suitable resolution deploring the use of "intoxicants" at our "smokers" and banquet suppers during our future annual meetings of the Society?

In this move for the *right* and general *up-lift* of our noble profession, I don't think we would transcend the limits of common discretion. If we wish to reach the laity and general public on the subject of Strong Drink, we must first enlist the sympathy and cooperation of the medical profession. And after having fortified it with the power of "self-control" and suitable weapons of defense and vindication, let it lead off in the fight, occupying the honorable position of *advance guard*, and by so doing, add new glories and honors to her many other recent achievements along the line of Preventive Medicine.

While the medical profession is doing such commendable work in the fight against tuberculosis, typhoid fever, diphtheria and other infectious diseases (destroyers of mankind), and winning the plaudits of the entire world, why should we not put up just as strong and determined a fight against a "curse" that is destroying about as many lives (one in every ten) and causing over one hundred fold more destitution and distress of heart among our people and kindred of every land and nation, saying nothing of the immoral tendency on future generations? The medical profession of all the leading nations of the world is taking a decided stand on this great question. The public looks to the medical profession for instruction and guidance in matters pertaining to health. And if we fail to measure up to these expectations along the line of preventive medicine, little may we expect, in the way of encouragement, toward the establishment of a National Medical Department in our Federal Government at Washington. The time has come when we, as a nation, should act on this important

matter. We know the large amount of harm that alcoholic beverages are inflicting upon the nation. Its ravages are known as well as those of typhoid fever or tuberculosis. We know how much weaker the resistance to disease is, on the part of the man or woman who has habitually taken alcohol, than the abstainer. We know the frightful mortality in pneumonia, typhoid fever and Bright's disease among the drinking men. We know the frequency and dangers of delirium tremens occurring, as it often does, in men who have drunk daily, but never in sufficient quantity to produce intoxication. We know the difficulties experienced by the drinking man when he requires a surgical operation. Above all else we know, according to the very latest statistics, that alcoholic beverages cause over one-tenth of the deaths in the United States, and the people of the United States spend over two billion dollars yearly for this poison.

In Germany, where beer is considered a national beverage, recent pathological investigations have revealed a disease known as "*Beer Drinkers' Disease*," and is recognized by a special condition of unhealthy enlargement of the heart, due to dilation, accompanied by some increase of tissue and fat. It is reliably reported that one in every sixteen of the hospital patients in Munich die from this disease. The disease manifests its worst symptoms in persons between the ages of forty and sixty years. It is not generally realized by the laity that such small amounts of alcohol taken in the form of beer is fraught with so much danger, but it is true as well as appalling. At such an age a man should be at his best, with prospects of a good old age. His loss to a community is incalculable when we consider the fact that many of our most prominent citizens and leaders of men are numbered among the "beer drinkers" of our country.

About 50,000,000 barrels of malt liquors represent the yearly output of the United States. In the year 1907 the United States consumed 2,019,690,911 gallons of intoxicating (alcoholic) beverages, which was more than any other nation in the world consumed. In view of these stern facts it behooves the medical profession of the United States to take a very bold stand on the subject. Today we have in the United States over three million hard drinkers of alcoholic beverages; over 125,000 of these die annually from the direct effects of alcohol, while over 5,000 of these take their own lives. In the year 1909 there were 8,404 suicides committed in the United States, and the two cities giving the largest number, according to population, were San Francisco, Cal., and Hoboken, N. J.

It is claimed by standard authority that seventy-eight per cent. of all suicides is due to alcohol. The mental depression that supervenes upon a debauch from the protracted use of alcohol is due to the direct action of the poison (fusel oil) on the brain cells, and also to its power of interfering with metabolism, in consequence of which various products of delayed excretion are allowed to accumulate and thus poisons and depresses the nervous system.

It is a well known fact that parental intoxication tends to produce impulsive degenerates and moral imbeciles, and the *brunt* of this evil heritage usually falls upon the nervous system of the next generation. In a single reformatory school in the city of Berlin, Germany, hereditary taint due to parental alcoholism is shown in sixty-seven per cent. of all the pupils. Of the 55,000 school children examined in New York city by Dr. MacNicholl, fifty-eight per cent. were below the required standard of intelligence, seventeen per cent. being actual dullards, bordering on imbecility. The family histories of 3,711 of the children were traced through three generations. This was done in great detail and care with regard to the hereditary conditions and their relation to the taking of alcohol. Of the children of abstaining parents and abstaining grandparents, only four per cent. were dullards, whereas of the children of abstaining parents, but drinking grandparents, seventy eight per cent. were dullards or feeble-minded. Thus we observe that the hereditary effects of alcohol is most noticeable in the children of the second generation, and its worst effects are seen in the brain and nervous system of these children. In many of our towns and cities where beer and other soft drinks, such as coca-cola, etc., are manufactured and sold promiscuously, a large per cent. of the school children are becoming regular drinkers, especially those of foreign parentage. The increasing prevalence of this habit is leading to a mental sluggishness among the pupils of the public schools, and is attracting the attention of educators and philanthropists in various parts of this country. When we consider the damaging effects of these beverages upon the minds of these children, what may we expect from their descendants in the next generation? Ye parents and guardians of the public health, pause for a moment and consider the seriousness of this, the greatest and most far reaching problem of the age! A solution of this great "social" problem has been agitated for the past half century, and I may say substitutes of every conceivable form have been vainly tried. Many of the great nations are using their so-called national beverages,

such as beer, wine, champagne, etc. Patent nostrums of every description containing from five to fifty per cent. of alcohol, such as "Hostettters Bitters," containing forty-four per cent. alcohol; Peruna, twenty-eight per cent. alcohol; Duffy's Pure Malt, fifty per cent. alcohol, etc., are used as substitutes for the ordinary whiskey or brandy, which contains from thirty-five to fifty-five per cent. alcohol. But like Banquo's ghost, and the Devil himself, it will not down on mere substitutes. Others resort to patent drugs containing morphia, cocaine, absinthe, etc. Recent investigation has revealed the fact that certain brands of cigars, cigarettes and many of the modern beverages contain cocaine, absinthe, etc., in the form of "dope." All honor to our distinguished Dr Harvey Wiley, and his co-workers in the Chemical and Agricultural Department, at Washington, D. C., for the noble work they are doing for humanity in exposing a few of the many gigantic American frauds. All honor also to President Taft for standing up for Dr. Wiley's principles and the "right." Let this good work go on! Let every true and loyal member of the medical profession stand by Dr. Wiley and his principles! Out of every one hundred drinks sold in the United States as whiskey, today, only one is really whiskey, and the counterfeit is *so clever* that "Club experts" fail to detect it. (Horsley). It is a common practice of the liquor dealer to stock his cellar with casks of crude grain or potato spirit, liberally tintured with "fusel or grain oil," an irritant poison. He then provides himself with a full line of laboratory-made essences, such as "*brandy essence*," which consists of oil of grapes, acetic ether, tincture of allspice, and alcohol. Rum essence; Butyric ether, acetic ether, tincture vanilla, essence of violets, and ninety parts of alcohol. The liquor dealer is furnished with a hand book by the essence manufacturer containing recipes for all kinds of essences, with instructions to make adulterated beverages. Into his *hidden reservoir* of crude grain spirits, he adds a prescribed quantity of several essences, which he advertises over his bar as *pure liquors*. From this one tank he draws Bourbon, Old Rye, Jamaica and Medford rum; Paul Jones, Old Tom, cherry, peach, apple and Cognac brandy. The cost of the amount of essence required to manufacture in this way 120 gallons of Cognac, or 60 gallons of Gin, or 40 gallons of any kind of Rum, or 160 gallons of any kind of whiskey, varies from \$3.00 to \$4.00. Such are the cheap, artificial imitations of distilled spirits, the poisonous compounds of fusel oil and whiskey essence, the saloon-keeper palms off with impunity upon his

willing, but deluded victims.

What has been said of the adulteration of whiskey and brandy applies with equal force to the milder beverages. In the manufacture of beer we find by chemical and microscopical examination such adulterants as formalin, with its destructive action on all the internal organs, salicin, picric acid, quassia, strychnia, aloes, etc.

During the past decade suicide, insanity, imbecility, epilepsy and other nervous diseases have increased about twenty per cent. among women, and is due, according to a standard authority, to the sad fact that our women are indulging too freely in the use of alcoholic drinks.

This brings us to the discussion of that part of my subject which causes me some degree of embarrassment and trepidation, knowing the fact, that out of regard and simple courtesy for our noble fair sex, few writers have dared to expose this rapidly growing evil on the part of the women of our country. It is only a matter of time, however, when the glaring facts will be proclaimed from the hill-tops in every land.

During a part of my vacation travels in continental Europe, as well as in our own country, I did not fail to take notice as well as *notes* of some very *notable* sites, people and things along the various routes and highways. In my travels through France and Germany I saw very few drunken men but a great many drinking women. The national beverage of wine and beer of these two countries may account in part for my not having seen more real drunkenness. During my sojourn in the world's metropolis, London, I saw not only drinking women, but women bar-tenders and drunken women. In making my rounds after hospital hours to the various places of amusement I made it a point to call at a number of the most fashionable saloons, where I gained some very important information on the "drink problem." On inquiry I ascertained that about two thirds of the most fashionable saloons in London were run and managed by women, many of whom were comparatively young women. I also observed that when serving a new customer, the bar-tender invariably added to each glass of beer a certain quantity of either whiskey or brandy, and on questioning her about this, she replied that her object was to draw custom as well as produce a more exhilarating effect upon her new patrons. In one of the most fashionable of these resorts I counted nine drunken women, five of whom were reclining on handsomely upholstered couches, while the other four were sitting in a half bent posture at a round mahogany-top table ringing for more drinks. In this saloon there were over a dozen bright-

faced young girl waitresses whose respective duties were to deliver drinks and attend the drunken women. In speaking to the bartender on the subject of her patronage, she informed me that about three-fourths of her customers consisted of society women, who drink a mixture of beer and ale and a specified quantity of the best brand of Scotch whiskey. She also informed me that her busiest hours were between eleven and one o'clock at night, after the closing of the theaters, and on Saturday nights she rarely closed before 5 o'clock in the morning. She also stated in the presence of my traveling companion, Dr. ———, that the society women of London drank more alcoholic drinks than the society men. I also found that the best restaurants and some of the leading hotels were run exclusively by women. I may add here that many of those conditions, I am sorry to know, prevail in many of our American cities, but not to the same extent, I am glad to say.

It behooves every true and loyal citizen of America, who has any respect for the female sex and the general uplift of future generations to cry out with a loud voice his utter disgust and disapproval of this most lamentable condition of affairs. We have here in our own country, and almost at our own doors, women who are high up in society, who drink intoxicating liquors at their homes and at their "clubs" until they are too drunk to walk.

It was a recent experience of the writer to attend one of these unfortunate so-called society women through an illness of delirium tremens and morphine addiction. When she could not get her usual beverage of rye whiskey, she would invariably resort to morphine, and vice versa. Her father was once a judge in the Supreme Court of his State, besides being prominent along other lines. She told me that she had been taught to drink wine at her father's home when quite a young girl, especially on stated occasions, until a fondness for stronger drinks gradually grew upon her. After her marriage her husband continued to indulge her in the habit until it got control of her. Her daughter, at the age of eighteen, also became a victim of the habit, and after her graduation at college married a worthless young man, but after a few months had elapsed a temporary separation became necessary on account of the young husband's inability to support his drinking wife. When last heard from, both the mother and daughter had separated from their respective husbands, and had returned to the old homestead to live with the old mother and grandmother, the old Judge having died only a few years previous. It is becoming quite a custom of late years

among our so-called society women to keep a "whiskey book" (a bottle shaped to appear like a small book) accessible when starting out on automobile spins, social calls to bridge and card parties, etc., in order to fortify them and refresh their conversational powers for these *exasperating ordeals*. These are but common observations of every day life in the experiences of about nine-tenths of the medical practitioners of the entire country, more especially of the towns and cities.

When we consider the physiological effects of alcohol on the brain of the mother and the unborn child, and its effects on future posterity, can we wonder at the fact of our lunatic asylums, penitentiaries and reformatories being crowded to overflowing with inmates? Are we surprised at the increase of insanity, suicide and nervous diseases among our women? It is claimed by standard authority that ninety-two per cent. of all persons addicted to alcoholic drinks have or had near relatives who were hard drinkers. The degeneracy caused by drinking women on their children and grand children lays the foundation for many diseases, such as tuberculosis, anemia and all forms of mental and nervous diseases. But the worst effects observed are upon the generative powers, which are the main factors in the production of degeneracy and anomalous conditions of both mind and body. Knowing the great susceptibility of the brain and nerves to the effects of alcohol, and its power to extract water therefrom, leaving them, as it were, in a hardened and dwarfed condition, we can readily account for the peculiar looking anomalies, born from degenerate mothers, and are filling our anatomical museums with these half-human monstrosities. It is a well known fact in physiology that the gray matter of the brain contains about eighty per cent. water, and it is an equally well known fact in chemistry that alcohol extracts the water from any substance that contains the smallest amount of moisture when applied either directly or indirectly, in small or large quantities. This being true, it is but natural to conclude that when the mother's system is tainted with alcohol, the same poison will be transmitted through the mother's blood to the child's brain and nervous system, and in this way cause such pathological changes as above mentioned. It is a physiological fact that the blood corpuscles contain about seventy nine per cent. water and the same rule holds good in reference to the affinity of alcohol for the water in blood cells as that for brain cells. We are all familiar with the important function of the white blood corpuscles in protecting our bodies from the ravages of infectious

disease, and we also know the importance of not allowing their functions to be interfered with in curing disease. We know how much harder these little white blood cells have to fight the micro-organisms of pneumonia, tuberculosis and typhoid fever in patients who are addicted to alcoholic drinks, and how often they are overpowered or made drunk as it were, by the paralyzing effects of alcohol. It is a settled fact alcohol, even in small quantities, paralyzes these white blood cells to a more or less extent, and hinders them from exercising their microbe-destroying function. Herein lies the explanation of many infections, many chronic illnesses, many incurable diseases, and many premature deaths. (Warbasee.) In view of the foregoing scientific facts, it is highly expedient and proper that as an organization of broad-minded benefactors we should make known to the outside world the stand we have taken on this important subject. Let the laity know, that while we are trying to exterminate tuberculosis, yellow fever, typhoid, diphtheria and the many other infections that are destroying millions of the human race, we are exerting our energies with even greater and more determined effort to exterminate a social "CANKER" that is not only destroying its millions of the human family, but causing more domestic unhappiness and heart-aches than the whole catalogue of disease.

While we acknowledge the debt we justly owe to Pasteur for the discovery of the cause of fermentation and the effects of micro-organisms upon living things, and bacteria as the cause of disease; and to our lamented Dr. Koch for his great discovery of the cause of tuberculosis, also to Finlay who suggested that the mosquito was the infecting agent in yellow fever, and while we erect a monument to Reed, and lay a wreath upon the grave of Lazear, let us ever keep before us the writings as well as the memory of our pioneers of the Temperance Cause, Turner, Warren, Rush, Davis, Duroy, Strumpell, Horsley, and our own beloved T. D. Crothers, of Hartford.

Septic Abortion at or About the Third Month.*

By Virginius W. Harrison, M.D., Richmond, Va.,
Associate in Obstetrics, Medical College
of Virginia.

By the term septic abortion, I mean one in which the contents of the uterus have become infected from without, introduced by the attendant in his lack of asepsis in the management of the case; by neglect on the part of the patient in not asking for

medical treatment, or by a criminal attempt having been made to interrupt pregnancy, by one whose technique was septic, and after treatment was nil.

The causes of abortion may originate in the fetus, as in diseases of the placenta, the cord, the amnion, the chorion, in short anything that will destroy the fetus or cause its expulsion.

The paternal causes are syphilis, alcoholism, and tuberculosis. The maternal causes are more numerous, and will, like the above, be only mentioned. A retroflexed uterus which has become immovable; chronic endometritis from any cause, especially a previous abortion improperly treated; acute peri uterine infection, as appendicitis or salpingitis; malformations of the uterus; infections of tumors. The infectious diseases in the mother may destroy or injure the fetus, as pneumonia. Lastly, we might mention general sepsis originating in other portions of the body, a sudden high temperature, anaemia, gonorrhoea and syphilis. Trauma, contrary to the general opinion, plays a very insignificant part in the etiology, as will be readily appreciated, when we consider the numerous abdominal operations, especially those upon the uterine appendages, which are performed during pregnancy without its termination.

Any one of these causes may originate an abortion, which would, if properly managed, be conducted to a safe and aseptic termination, yet if the attendant has neglected to prepare the external genitals, as for any other surgical operation in this locality, or has introduced an unclean and ungloved finger into the vagina and cervix, he may unknowingly or criminally be the means of changing the clinical picture. A patient may or may not be aware that she has had an abortion, and either through ignorance or fear that it may be checked will not seek medical advice, until the product of conception has become infected. This latter may readily occur by means of the secundines protruding through the cervix into the vagina, where recent authorities claim that we frequently find pathologic germs even in the normal unimpregnated woman.

Not every woman who presents herself, giving the history of a miscarriage, can be relied upon as being infallible, as they have learned that it is the practice of some physicians to curette for any hemorrhage from the uterus, and their motive may be to rid themselves of an undesirable citizen in an ethical manner.

Usually at our first visit we are met with a ready made diagnosis, though the patient has not been taught the value of saving all the clots that have been expelled from the

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vagina; we thereby will have lost one of our most valuable means of determining what is left in the uterus.

However, in a regularly menstruating woman we can approximate this fact first, by ascertaining the number of months she has missed her periods, and second by making a bi-manual examination of the uterus. By this means we can determine the size of the organ as compared with the number of missed menses; we can also determine if the contractions are continuing, the consistency and dilatability of the cervix, and the probability of the uterus delivering itself, and the ease with which the active treatment can be carried out, if considered indicated.

In a complete abortion, by the above examination, we will usually find the cervix contracted, the uterus smaller than we would expect at the period of pregnancy, and the bleeding stopped. We must keep in mind the fact that the enlargement of the uterus during the first few months is physiological and not mechanical. This enlargement takes place even if the pregnancy is extra-uterine.

In an incomplete abortion we usually, but not always, find the cervix patulous, more or less blood escaping, and possibly some of the ovular remnants presenting in the cervix or at the external os; if the case has been septic for several days, the odor of the vaginal discharge will endorse our suspicion.

The clinical history of a chill, possibly very slight; the temperature not necessarily much elevated, but the pulse is our best guide; while there may not be much change, it will generally show a steady increase in rate, the patient will soon present a picture of surgical sepsis, the degree dependent on the amount of systemic absorption of the toxins. We must not think of this condition as any but surgical sepsis, it differs in locality but not in its pathology.

Having made our diagnosis of septic abortion, we still have several disputed questions that must be studied and answered, viz.: Shall we empty the uterus mechanically when it contains septic material? Shall we rely upon the bacteriological findings in determining our method of treatment? Will we disseminate the toxins more by active interference, than by leaving to nature the duty of expelling the infected uterine contents? If we decide upon active treatment, what methods will we use and when are they individually indicated?

Watkins, of Chicago (*American Journal of Obstetrics*, September, 1913), in a paper on Puerperal Infection has the following to say: "The bacteriological examination of vaginal and uterine secretions is of relative small value, as the results are often uncer-

tain and misleading," and quotes the following to emphasize what he has said: Rosowsky found in the vaginal discharges of sixty-one normal non-pregnant women the anaerobic streptococcus putridus in 40%. Zangemeister found hemolyzing streptococci in 13% of women during the puerperium. Winter states that approximately 33% of women have virulent streptococci in the vagina. Numerous observers have reported the presence of virulent bacteria in the lochia of afebrile cases." Continuing, Watkins says that "the blood cultures are the only means at present of an accurate diagnosis of the variety of the infection."

After we find the infection in the blood, we no longer have a local, but a systemic disease to combat. As the putrid germs cannot live except in dead tissues, the disease of this cause is self-limited, and the infection in the blood originated by the streptococcus in the uterus will not be cured by curetting the uterus, for it has passed beyond the reach of any local treatment.

Most of us were taught to empty the uterus when it contained infected material, and no doubt we have seen results which we thought justified such teaching, yet most authorities with almost unlimited experience, in well equipped hospitals, aided by bacteriological findings, with skilled after-treatment, differ very materially as to the best management of these cases, as well as the management of aseptic abortion. In aseptic abortion some advise the use of the curette in every case unless it is complete, the chief advocates being Edgar, and Young and Williams, of Boston. These latter report 1331 cases of abortion; operated on 87% with a mortality of .07%. No infected cases.

McPherson (J. A. M. A., Aug. 31, 1912) in reporting the analysis of 3500 cases of abortion, says that the mortality for all classes of cases was 1.8%, and that 97% of all cases treated by radical measures, including curettage, the result was satisfactory. Other authorities advise that you to let the uterine cavity alone, and say that nature can eliminate all the putrid material, and if the infection is not putrid, you will do more harm by entering the uterus than the infection may do. There seems not much difference of opinion in septic cases as far as the metal curette is concerned, for all advise to let it alone except in very rare and urgent cases. This advice is given by such authorities as Whitridge Williams, Edgar, Delee and others, as they all advise the use of the finger when possible, and even this curette must be used with the greatest care. When the infection is not severe nor symptoms very urgent, we have

good authority to let the uterus alone; this is recommended by DeLee, Reis, Watkins, Winter and others. There is in fact no unanimity of opinion on the subject. So much is this true that the American Medical Association section on Obstetrics, Gynecology and Abdominal Surgery at the 1912 meeting appointed a committee to investigate this subject, which was done, and a report was made to the 1913 meeting. I am sorry I could not include that report in this paper, but the chairman, Dr. DeLee, could not furnish me with a copy at this time. See A. M. A. Journal, Oct. 25, 1913.

It is important for us to be impressed with the fact that when the woman has a chill, no matter how slight, from that moment the disease ceases to be local and becomes systemic. Now I do not mean that a woman who has an abortion cannot have chill from other causes. As long as the infection is local, putrefactive, and confined to the remnants of the ovum, and if we had a reliable method of determining this fact, we cannot but feel that the best treatment would be their removal with the gloved finger, done aseptically as far as we are concerned, for a few moments work will accomplish what might take nature several days. We cannot tell, as yet, that it is simply putrefactive; it may be a mixed infection, as is very frequently the case, and the simplest method, carried out with the gentlest manipulation, may produce sufficient trauma to the endometrium for entry of the toxin, resulting in a serious systemic infection, let alone nature may have expelled unaided the infected material.

Our treatment for septic infection must vary according to conditions found in the patient. To dilate the cervix with metal instrument and remove the infected material with a metal curette has been the recognized treatment for some time, but is at variance with that now advised by most authorities, viz: when the uterus is to be emptied mechanically the well oiled hand must be introduced into the vagina and the finger must be used as both dilator of the cervix and as a curette for the uterus. Of course thorough asepsis, including the use of rubber gloves, must be used. With the finger as a dilator and curette, we are using a known force, also an intelligent idea is gained as to when the uterus is cleaned. Men of more or less experience in the use of metal instruments have left part of the ovum undisturbed, and even perforation of the uterus has occurred, to be followed by the expulsion of a portion of the intestine through the uterine wall. At the site of the embryonic placenta the tissues are very soft, and have depressions which feel like decidua; these are the places where perfora-

tions are most likely to take place. Again, thrombi are sometimes broken up with dire results.

I must admit, however, that the use of the dull curette or the placental forceps in a primiparæ is a very much easier operation, and in my hands produces less trauma than inserting the hand into the vagina. I have also noticed frequently in the primiparæ that I thought I had the cervix sufficiently dilated, but by the time I had extracted a portion of the uterine contents, the mechanical stimulation of the cervix was sufficient to make it close tightly enough to prevent me completing my work.

If the woman has borne children the vagina is more relaxed, and it is easier for the hand to enter the vagina and empty the uterus with the fingers, especially if the other hand is made to press the uterus down on the vaginal fingers, instead of trying unsuccessfully to push the vaginal fingers up into the uterus.

If we fail in the use of the animated curette and dilator, the finger, we still have the metal instruments at our command, but we must remember that the sharp curette has no place here, use only one that is dull, the conditions are different from that in the non-puerperal state. Probably the best way of treating incomplete abortion, both aseptic and septic, unless the demands are urgent, is by packing the vagina, and when possible the cervix, with iodoform gauze, and allowing it to remain for from twelve to twenty-four hours; on its removal we will often find the desired object; if not, repacking can be done, if the condition of the patient will justify the delay. The packing causes softening of the cervix, and stimulates contractions of the uterine muscles. Some advise wiping out the cavity of the uterus with sterile gauze, wrapped around long dressing forceps. I have used this with satisfaction in women whose vaginas were large, and cervixes were well dilated, but have not been able to succeed often in primiparæ.

The question of washing out the uterus with antiseptics has been settled by its abandonment; some few still advise the use of a 1% lysol solution, sterile water, or saline solution; even these authorities only advise its use once, then get out of the uterus and stay out.

Some cases of abortion are complete, only 13%, claimed by some students of the subject, yet we will have a severe form of sepsis. This condition is usually produced by the criminal who interrupted the pregnancy. The streptococci are the offending germs as a rule. If a curettage is done, even with a dull curette, in this form of infection, we are almost sure to make our patient worse

if we do not destroy her life. These cases are best managed by systemic treatment of the woman. In streptococcal infection treat the woman, not her uterus, should be our slogan.

The systemic treatment will consist of nourishment easily digested, tonics, stimulants, as strychnine, absolute rest of mind and body, fresh air in the open air and sunlight. Young and Williams, of Boston, claim that they have reduced the mortality from this condition 20% by the fresh air treatment; this is carried out in the same manner as in pulmonary tuberculosis.

Anti-streptococci serum and the vaccines have not given uniform results, nor have they yet proven themselves of sufficient value to be relied upon. Pituitary extract has been tried in abortion, with the hope that the uterine cavity may be emptied by the contractions which it was expected to originate or intensify, but was found to be of little value. The internal administration of antiseptics in systemic infection has to be carefully watched, or we may destroy the anti-bodies that are forming in the woman to defend her in the battle for life.

In conclusion I will present four questions for your discussion, with the hope that some definite idea may be formed as to the best methods of handling these unsettled conditions:

First. Shall we empty a septic uterus mechanically, (a) putrid; (b) streptococci and (c) mixed infection?

Second. Will we rely upon bacteriological findings in the (a) lochia, (b) blood?

Third. What method will we use in the primiparæ (b) multiparæ?

Fourth. Shall we make a distinction in treatment in puerperal infection after abortion and after term labor?

401 North Allen Avenue.

A SURGICAL CLINIC.*

Presentation of Cases of Actinomycosis and Hodgkin's Disease, and a Case Illustrating Unusual Bone Repair.

By Richard N. Duffy, A.B., M.D., Newbern, N. C.

With your permission I will exhibit to you this morning several cases which have been most interesting and instructive to me, and I trust that they will prove equally so to you.

The first case is one which illustrates the regenerative capacity of bone. This man has been for years the master of a small sailing vessel. Three years ago, this past

July, his ankle became entangled in the loop of a sail rope on board his vessel; the sail jibed over and pulled the rope suddenly taut. His foot was, as a result, practically amputated. He was admitted to our hospital here as a Marine Hospital patient twenty-four hours after the injury. There had been very little attempt to cleanse the wound, and it was quite filthy. His temperature was elevated two degrees on admission. Upon examination, after the patient was fully anesthetized, it was seen that to complete the amputation started by the rope, it would have been necessary to make only one clip with a pair of scissors. All of the structures anteriorly were severed. The tibia and fibula were both thoroughly broken through and extensively comminuted. Posteriorly, the tendons of the Plantaris and the Tibialis posticus and the Tendo Achillis were intact, and, most fortunately, the posterior tibial vessels had not been injured. A small bridge of skin about two inches long covered the intact structures.

Owing to the fact that the posterior tibial vessels were not injured, and the circulation in the foot fairly good, the attempt was made to save the foot. Accordingly the wound and the surrounding parts were thoroughly cleansed with soap and water, alcohol, bichloride of mercury and normal salt solutions; the ends of the fractured bones were shaped up and wired together. The severed tendons were united as far as possible, drains introduced in the dependent angles of the wound, fascia and skin brought together with sutures and the foot and leg put up in plaster.

The patient did fairly well, but after about three weeks it became quite evident that a discharging sinus which had formed would not heal without further operative procedure, as it was found that the discharge was being kept up by necrotic bone in the region of the tibia. Accordingly the patient was again anesthetized and the wound reopened. At this time it was found that the fibula had united well, but between the two ends of the tibia there was quite a mass of necrotic bone, which when removed left a space of about one and one-half inches. It then became a question whether to remove a portion of the fibula and further shorten the leg, so that the two remaining unhealed fragments of the tibia could be brought together, or to attempt to fill out the gap between the two ends of the tibia and leave the fibula intact. Inasmuch as it was seen that nature had already made this attempt, by the fact that osteoid tissue could be felt around the zone of necrotic bone, the latter plan was decided upon. Accordingly the cavity left after the re-

*Presented before Seaboard Medical Society at meeting in Newbern, N. C., November, 1912.

removal of the necrotic bone was thoroughly swabbed with pure carbolic acid followed by alcohol and then normal salt solution. A blood clot was allowed to form between the two ends of the tibia, the osteoid tissue sutured over this with catgut and the wound was closed without drainage.

The result was as happy as could have been anticipated. The blood clot did not break down, but became organized; the osteoid tissue evidently grew into it and finally became calcified. The gap was filled in by good sound bone and the patient now walks and even runs without difficulty. There is very slight shortening of the leg. The motion in the ankle joint is quite free in all directions. I had this patient wear a brace for several months but this has been long ago discarded and he gets about now very actively and, as you see, there is barely a limp when he walks.

The second patient came to me in July last, complaining of a swelling in the right temporo maxillary region and inability to open his jaws well. He had slight pain and some fever. About two months previously he had had a wisdom tooth pulled on that side. There was evidently injury to the inferior maxilla, as some weeks after this he noticed that a small particle of bone came out of the cavity, and soon after the tooth was pulled his jaws became quite stiff. There was also some purulent discharge from the cavity a few days after the tooth was extracted.

At the time I first saw him there was quite a marked swelling in the right temporo maxillary region, and also slight swelling in the right parotid region. Tenderness was not marked except over the horizontal ramus of the inferior maxilla near the angle. There was no fluctuation. There was a slight purulent discharge from the wisdom tooth cavity.

Later, fluctuation developed in the temporo maxillary tumor and incision revealed a large quantity of a chocolate brown pus containing numbers of yellow granules about the size of a pin head. Since this time purulent accumulations have developed in the parotid region, on the cheek and down on the neck, the latter being in the form of a Ludwig's angina. In all of these situations the character of the pus was the same, the characteristic yellow granules being the distinctive feature. In addition to incision and drainage of these pus accumulations, the patient has had removed the remains of the wisdom tooth which was found to have been broken off, and several sequestra have been removed from the inferior maxilla.

Microscopical examination of the yellow granules found in the pus revealed the *Acti-*

nomyces hominis as the infecting agent. The disease, therefore, is actinomycosis, a rare condition, as you know. The infection has arisen, no doubt, through the injury to the inferior maxilla.

Actinomycosis affects both man and certain domestic animals, especially oxen, swine and horses. It is an example of microbic infection in which the parasite belongs to the higher order of bacteria, in this case the streptothrix group. Macroscopically, the characteristic thing about the disease is its formation of granules, either lying free in the pus or embedded in the surrounding granulation tissue. They are usually yellow in color, though they may be white, green or black. Under the microscope these granules are seen to be colonies made up of filaments which may be branching and are comparatively thin, about five micra in diameter, also coccus like bodies, which are derived from the filaments and are of the nature of spores, and clubs, which are elongated pear-shaped bodies seen at the periphery of the colony. The clubs are extremely fragile bodies in the human type of the disease and are frequently very hard to demonstrate.

The parasite produces in the human subject a chronic inflammatory change, usually ending in suppuration, which slowly spreads. There is a comparatively large production of granulation tissue, so that in some instances the mass feels solid. In most cases suppuration is the outstanding feature. The pus is either of a chocolate brown or greenish yellow color.

The lesions in the human subject may occur in almost any part of the body. The paths of entrance are various. In most cases these are through the mouth, around a decayed tooth (as in this case), by way of the crypts of the tonsils or some abrasion in the mouth. The parasite may enter through the œsophagus and the primary lesion may then be in the intestines. It may enter through the respiratory passages, the primary lesion then being pulmonary or peribronchial. Infection may also occur by the skin surface, or by the female genital tract. When the infection has once established itself metastatic abscesses may form in the internal organs. The liver is most frequently thus affected, but the metastases may appear in any organ. The metastasis is through the blood stream.

Outside the body the parasite grows on various kinds of grain, especially barley, and infection arises from contact with this infected grain.

The treatment of the disease consists in incision, curetting of the abscesses and the administration of potassium iodide internally. In this case which I have had under

observation I have found that the most useful irrigation fluid for use in the abscess cavities is a weak solution of tincture of iodine.

The last case which I will present to you is that of a man who consulted me first only a few days ago. He is thirty-seven years of age. About twelve years ago he had a glandular enlargement in the left axilla. About twelve months ago he developed two tumor masses on each side of his neck. He was told that these were enlarged glands, and he had them removed. Since this time there has been a continuous growth of a tumor on the right side of the neck. There is very little pain about this tumor. He does not have any fever. He has never had a chronic cough. He has lost about fifty pounds in weight and is quite weak. His family history is negative. He has always been quite healthy except for this illness. He has never had syphilis.

On examination you see the tumor is quite large. It measures about 15x15 cm. The skin over it is a bluish red. It is not adherent to the tumor. The tumor mass is firm and lobulated, as you see. It is somewhat moveable. There is no evidence of fluctuation. It is not very tender. The patient can scarcely open his jaws on account of the tumor and there is encroachment on the cavity of the pharynx internally. His lungs are clear. His heart is normal except for a rather weak impulse. There is no enlargement of his spleen or his liver. There is slight enlargement of the glands of both groins and the left axilla. His blood shows only a secondary anæmia.

The possibilities to be considered in the diagnosis are lymphatic leukemia, carcinoma, sarcoma, syphilis, tuberculosis of the lymph glands, the pseudo-leukemic form of tuberculous inflammation and malignant lymphoma or Hodgkin's disease.

The blood shows only a secondary anæmia. There is no lymphocytosis. The enlargements are not as extensive and the disease not as acute as we see in lymphatic leukemia. We do not have any tendency of the individual glands to adhere to each other in lymphatic leukemia, as we have in this case. These points would rule out this disease.

Carcinoma or sarcoma are both associated with a great deal of pain. Either one of these tumors which had reached this size would have been ulcerated by now; the skin here is not even adherent. The tumor would also have been firmly fixed to the underlying structures and practically immovable. We can, therefore, disregard these two possibilities.

Enlargement of the lymph nodes is found quite constantly in primary and secondary

syphilis. One occasionally encounters enlargement of individual nodes in the tertiary stage, but never to such an extent as this. These enlarged syphilitic glands are prone to ulcerate and then give rise to quite characteristic punched out ulcers.

In tuberculous lymph node enlargements there is quite early adherence of the skin, softening and breaking down of the glands, leaving sinuses with dirty looking granulations. A mass this size, if tubercular, would probably be traversed by sinuses. In the pseudo-leukemic or subacute form of tuberculous lymph node enlargement, however, there is no breaking down of the glands. They do not, however, reach so large a size as this and are not associated with so much anæmia and cachexia.

We have left then only one other possibility, and that is Hodgkin's disease or pseudo-leukemia. This is quite a typical case of Hodgkin's disease. In this condition the nodes become enlarged on one side of the neck, and soon after those of the other side are affected. This is accompanied by enlargement of the axillary and inguinal nodes, and later on by bronchial, mediastinal and mesenteric enlargement. It is progressive and affects the lymph nodes more or less symmetrically. There is no tendency to suppuration. The individual nodes become adherent to one another. The enlargement is practically painless and is not accompanied by elevation of temperature. There is marked cachexia and anæmia.

The treatment, which is not very promising, consists in the administration of arsenic and exposure of the tumor to the x-ray.

Temporosphenoidal Abscess Following Mastoid Disease and Aural Polypus.

Davis reports the case of a girl, aged 14, who was admitted to the hospital six weeks previously with vomiting, vertigo, and facial paralysis. A large aural polypus was protruding from the meatus. There had been otorrhea on and off for four years. There was no indication of any mastoid tenderness. The polypus was removed and the mastoid antrum opened; the roof of the antrum was eroded and an extra-dural abscess was evacuated. The brain protruded into the wound, but did not pulsate; a knife was therefore passed into the temporosphenoidal lobe, and 3 drams of pus were evacuated. The dura mater was snipped away over the brain abscess area and the wound was left open. The girl made an uninterrupted recovery.—Proceedings of the Royal Society of Medicine.

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EDWARD C. REGISTER, M. D., EDITOR

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STATE MEDICINE.

We have been watching, with unusual interest, the beginnings of State Medicine in England. The National Insurance Act has been forced upon the profession over there, and is, perhaps deservedly, unpopular. But the idea is worthy of the most earnest consideration, as containing the germ of better things, medically, both for the profession and for the people. It is certain to be more and more thought about and discussed as time goes on.

Certain it is that the forces which are fighting disease are more like an unorganized mob than an orderly and disciplined army. Some of the advantages which an ideally organized and administered system of State Medicine might have, for the physician, are:

First. The chance to limit his work to one branch of medicine, after a certain period of "general practice" in the thinly settled districts. And in no other way than by specializing can a man's work be thoroughly satisfactory either to his patient or to himself.

Second. The opportunity for post graduate work at regular intervals. This would be required in a well organized medical corps.

Third. The elimination of the strength-sapping night work, after a man has passed through his apprenticeship in a country district and become stationed in a town. In all towns of any size the ordinary night calls should be made by a man who is on duty at night and relieved from duty in the day time. And this night service should constitute a part of his apprenticeship, just as the general practice in the country should.

Fourth. The financial problem would be solved for the doctor, and he would have a regular income, graduated according to the position he proved himself able to fill. His vacations and his periods of postgraduate work would also come regularly, and he would not have to worry, during them, because of the fear that his competitors were taking his business away from him.

As for the patient, the professional services rendered him would be a matter of record, and the record would be examined by the immediate superior of his medical

attendant, so that his case would practically be seen "in consultation" from start to finish. He would be turned over promptly to a man specializing in the line of work into which his ailment fell, with no tendency on the part of his first attendant to keep the case if he could possibly have better care elsewhere.

The patient would be assured, always, a physician who must make a creditable record in his case, as in all others, in order to be advanced: one who is not overworked, tired out, or so rushed as to be inclined to superficiality; one who is interested in his work for the work's sake, and not in the least because of the possible size of the fee. He would also avoid the heavy expense of medical services at the time when he is least able to meet it.

Utopian visions, these! you will say.

Yes, they are; but we are in an age of progress, and if we read carefully the signs of the times, we cannot fail to see that some of these visions, at least, are coming true.

E. N. R.

THE NEW INFANT FEEDING.

The changes in the ideas on infant feeding have been so rapid and so radical, in the last six or seven years, that the newer ones are not to be found in any of the text books on Diseases of Children. It is less than ten years ago that the idea of modifying cow's milk so that it should resemble mother's milk as closely as possible in its percentages of fat, proteid and carbohydrate—the so-called "American" or "percentage system," devised and advocated by Rotch of Boston, held the center of the stage. The proteid was at that time considered responsible for most of the troubles of artificial feeding, and the ideal striven for was a high fat, high sugar, low proteid mixture.

Now we have learned that the proteid is the least liable of the three to cause trouble, and that the element to beware of, to watch with constant suspicion, is the fat. Every careful observer who has once had his attention called to it has seen in his own practice the "fat constipation" of high fat mixtures, with its fretfulness, its hard, white, offensive smelling stools, its ammoniacal urine, and its stationary or falling weight. The stools of this condition contain the masses of calcium soaps of the fatty acids, which were formerly regarded as proteid curds.

The sugars also form an important part of the problem. Milk sugar, which is of course the form present in breast milk, would seem to be the ideal. But milk sugar is more easily fermentable than malt sugar, and many infants show an intolerance for a sufficient amount of milk sugar, who can

easily take malt extract or dextrimaltose. More than this, the malt extract is a most useful aid in the relief of constipation, which is often a serious matter in artificial feeding.

Far from being the greatest source of trouble, the proteid of milk seems to be the most easily digested and assimilated of the three elements. Thus Finkelstein and Meyer have devised an "albumen milk," "Eiweissmilch," which has a high proteid content with low fat. And this is found especially useful in marantic infants who have had repeated upsets and attacks of indigestion, and whose tolerance for food has been greatly reduced. In the same class of cases buttermilk is used to advantage, and buttermilk is again a low fat and relatively high proteid food.

The most important lesson of these recent studies is "Beware of a high fat percentage." That hint alone will solve many and many a difficult problem in feeding. And the second lesson, "Chose the right form of sugar"—and it usually is a malt sugar—teaches us how to put the right sort of fat on a lot of thin babies, and gives the biggest help we know of in overcoming constipation.

Outside the Journals, the only satisfactory source of information concerning the new infant feeding which we have found is C. G. Grulee's "Infant Feeding" (Saunders, 1912), and that is very satisfactory indeed.

HOW DO YOU READ?

If the book agent—Saunders' man or Appleton's man or some other man—is a good one, you feel that all you need to do is to buy the books and all the knowledge between their covers is yours: unless you look cynically at the ones you bought last year, standing there on your shelves. In the same way it gives you a feeling of superior wisdom and up-to-the-minuteness to have several of the very best journals coming in every week or every month. You look over the table of contents and read the medical news and one or two of the editorials and quite a few of the ads and lay it carefully on the pile with the others, taking a great big resolve to read a couple of the articles which look especially good tomorrow or the day after.

Yes, the easy part is buying and paying for the literature, and the hard part is transferring the ideas to one's head. The magic touch that makes one read when he needs sleep, read in the train, in the street car, in the five minutes snatched here and there three minutes there, read and remember without conscious effort, is the point of contact with a case—one which is a puzzle now, or one

which was not clear a while back, or a condition which one is encountering with sufficient frequency to give it special interest.

More often than not one page or one paragraph in a book will pay for the volume, or a single article for a years subscription to the journal. That is how one is justified in buying books and journals with fair lavishness. It is not fair to say "I will read through the ones I have before I buy more books, and I will wait until I am reading all through the journals I now take before I subscribe for any others."

We believe that such a course would be a tremendous waste of energy. Once your mind is *en rapport* with a subject, it seizes eagerly every bit of information it can reach on that subject and assimilates it without appreciable effort. But try to make it retain one thing, when the subconscious is busy with another, and see how slow and laborious progress is.

If you are having trouble holding a fracture in reduction, you will grasp immediately all the information about that particular fracture which you can find, in your own books and in those of your neighbors. If the baby in one of your best families is persistently constipated, you will find an otherwise dry and tedious article on the digestion of fats and sugars intensely interesting, and will wish that it were fuller.

That is the way to read, and that is the justification for money spent on books—new books, expensive books, other books on subjects which are already covered in your library, but covered by books four, five or six years old, and for journals, so kept that the particular article one needs can be located, whether it was one year back or five.

CHRONIC PUS INFECTIONS.

We believe that nearly all physicians who were not quacks used to sigh when a chronic pus infection came into the office—an old urethritis, a suppurating middle ear of long standing, a chronic endocervicitis, a fistula which had been discharging for months and months. There was so much chance that after your best effort you would not effect a cure: there was such a good chance that you would not add to your reputation. Then, too, every one who is not a quack hates to take a patient's money unless he has really given some benefit in return.

The autogenous vaccine has changed all this. With it even pyorrhea alveolaris becomes grist for your mill. And you can be absolutely certain that in a large proportion of cases you will be able to cure.

The making of the vaccine is a very simple matter, after you have been shown how. Some agar slants, with rubber caps over

them so that they will not dry out; an alcohol lamp, or Bunsen burner; a platinum loop, a couple of small funnels, some medicine glasses and medicine droppers; then your microscope and blood counter; and a "Thermos" bottle to serve as an incubator—and it makes a very excellent one—that is all the apparatus one needs. Outside the microscope and blood counter, which you must have anyway if you are to consider yourself a real doctor, five dollars will cover the whole cost.

It doesn't take over three-quarters of an hour to make your vaccine, after you are familiar with the technique. If you make your own, you will use them more often than if you send to a laboratory to have them made. And in the case of one organism at least, and that a very important one, the gonococcus, your culture must be made and incubated on the spot, since a variation from the correct temperature for only a few minutes will kill the bacteria.

The autogenous vaccine is a therapeutic measure which no one can afford to neglect. The way in which an old gleet, which has been sounded and irrigated and massaged and urethroscoped and injected and instilled, and which has driven your patient into neurasthenia and prevented his marriage, will clear up with a well managed course of vaccines, is miraculous. And when you can cure cases like these, your patient will pay, gladly and liberally.

A vaccine is a two-edged sword, and a dangerous tool if used carelessly. But there is no need of giving enough to get a decided reaction. The reaction is not necessary to accomplish a cure; and by making sure that your organisms are killed, and starting in with a small dosage and then keeping it below the amount necessary to produce a decided reaction, you will be safe. The technique can be learned in a few days in any good postgraduate school.

THERAPEUTIC LAMPS.

I have found that but few physicians know anything about therapeutic lamps, and the ones having any knowledge of them differ in their opinion regarding their action, and which is the best kind.

The two main varieties of therapeutic lamps are the arc and incandescent. Some prefer the arc and some the incandescent, while others say that each one has its special advantages. Dr. C. A. S. Sims says he secures much better results with the incandescent, and Dr. Max J. Walter also prefers the incandescent. My personal opinion is that for general effect the incandescent is best, while for local use, possibly the arc is best. Dr. Max J. Walter imports a 50 candle power blue globe incandescent lamp

for use in the Pennsylvania Institute. It can be run with either direct or alternating current. The globe lasts them a year when used several times a day. The lamp can be obtained for \$10.00 and an extra globe for \$2.50. This lamp is portable, weight $4\frac{3}{4}$ pounds.

These lamps give good results in the treatment of old sores and as a reliever of any kind of pain.

Dr. Walter says: "These lamps undoubtedly have therapeutic properties, especially the natural blue glass, though scientists have failed to explain why blue light is so much better as a pain reliever than white light. The absorption of ointments and medicines is more rapidly accomplished under the effect of light than otherwise." He further states that: "The therapeutic lamp has no value in the treatment of the local lesions in gonorrhœa, and only a slight value unless you have a high 500 candle power lamp in the treatment of gonorrhœal rheumatism. The application of dry hot air, the so-called baking process, is the best treatment in gonorrhœal arthritis, but of no effect as far as the seat of the infection is concerned."

Dr. Walter has no use for colored screens; he considers them toys. Many manufacturers try to lay great stress on colored screens, but I agree with Dr. Walter. If a physician wishes to use the different colors, he should order the colored globes.

The incandescent therapeutic lamps are made from 50 to 500 candle power, and there is a difference in opinion as to their usefulness. Some claim that a 50 candle power lamp will give the same results as a 500 candle power, only takes longer to give the treatments. Others claim that a high candle power lamp possesses influences that the low candle power does not have, besides having deeper penetration. I am inclined to think that the high power lamp has advantages over the low power lamps.

Therapeutic lamps are not so important to the general practitioner as to the office practitioner, or one who devotes his attention to chronic diseases. It is an evident fact that the therapeutic lamp is an important apparatus, although many say it is useless. The same thing is often said of drugs, surgery, and all other methods of treatment.

The therapeutic lamp is of value in driving in various remedies, a thing worthy of due consideration, as by this method we get the combined action of the lamp and the drugs. This does away, to a certain extent, with stomach hypodermic and rectal medication, and will, therefore, suit many patients.

Editorial News Items.

Mr. Geo. W. Watts, of Durham, will add a new building to the present very complete equipment of the Watts Hospital in that city, to be devoted to the exclusive study and treatment of pellagra. Surgeon J. J. Lumsden of the United States Public Health Service visited Durham last week and conferred with Mr. Watts relative to this new building and the proposition recently made for the general government to establish a pellagra station in Durham with headquarters in Watts Hospital.

Dr. W. G. Konseal, of Newberry, S. C., has been appointed by Gov. Cole Blease a Trustee of the South Carolina Medical College.

Dr. John T. Borden, of Craven county, has been appointed an assistant surgeon United States Navy.

Buncombe county, after debating the whole time county health officer for some months and the announcement being made prematurely once or twice, has at last arranged for Dr. Dan E. Seveir, of Asheville, to devote his entire time to the work. He receives a salary of \$2500.00, \$1700.00 being paid by the county commissioners and the remaining \$800.00 by the county Board of Education.

In the scientifically conducted "Better Babies Contest" conducted under the auspices of the Asheville Board of Health at the Western North Carolina Fair last week the year old baby of Dr. J. M. Brookshire, of Deciever, took first premium.

After a contest over the proposition the legislature now in session has just passed an act permitting the road authorities of Burke county to cut a public highway through the 1500 acre grounds of the State Hospital at Morganton. The proposed road is fully half a mile away from the important building and it is claimed will in no wise disturb the desirable privacy the institution has enjoyed since its establishment nearly 40 years ago.

Dr. N. A. Thompson, of Lumberton, N. C., is taking a two months postgraduate course in New York City.

Dr. C. A. Shore, Director State Laboratory of Hygiene at Raleigh, announces that beginning about October 20th he will be able to furnish anti typhoid vaccine according to the provisions of the act of the last

legislature. It was ordered to be furnished at cost which will bring the charge to a very nominal sum.

The authorities of Buncombe county and the city of Asheville are planning the early erection, on the basis of equal division of the cost of construction, of a County Hospital for Communicable Diseases. The location, properly isolated, is an attractive site overlooking the Tabkeestee River, and the planned buildings include a residence for the superintendent and such other structures as will make a first class institution for the intended purpose.

The Raleigh Chamber of Commerce was entertained at a recent meeting of that body by an address by Dr. H. A. Royster, of that city, on his observations upon municipal government and sanitation in European cities recently visited by him during his summer vacation.

Of the 100 counties of North Carolina ten now have "whole time county health officers," paid salaries from \$1800.00 to \$2500.00 each. Recently a three day's conference of these officials was held in Raleigh with a view to better instruction in their duties and the promoting of uniformity in the several counties. The following gentlemen attended the conference of health officers: Dr. A. N. Cox, Columbus county; Dr. Arch Cheatham, Durham county; Dr. W. M. Jones, Guilford county; Dr. H. H. Utley, Johnson county; Dr. J. Strickland, Forsythe county; Dr. Samuel Ellington, Rockingham county; Dr. B. W. Page, Robeson county; Dr. G. M. Cooper, Sampson county; Dr. D. E. Seveir, Buncombe county; Dr. C. T. Nesbit, New Hanover county.

Dr. E. L. Stamey, formerly of Hookerton, N. C., has become the Resident Physician at the "Keely Institute" in Greensboro, N. C.

The State Hospital for Insane at Raleigh has purchased in Richmond a large conservatory which will be erected on the hospital grounds to take the place of the former structure which is now much too small to serve the demands of the institution.

Dr. J. G. Busby, of Spencer, has returned home after postgraduate study in New York.

Dr. S. B. Pierce, formerly of Weldon, N. C., but who has practiced in Durham, N. C., for the past four years, has returned to Weldon and resumed practice.

A negro man was taken into custody by the sheriff of Rowan county last week with a "large satchel of surgical instruments in his possession," and for the possession of which the negro was unable to account. Apparently he had secured them some distance away as no physician in any of the nearby towns had lost such a case.

Dr. Samuel W. Rankin, a younger brother of Dr. W. S. Rankin, Secretary State Board of Health, after a year's postgraduate work in hospital, has located for the practice at Concord, N. C.

Dr. Edward Jenner Wood, Chairman of Pellagra Commission State Board of Health of North Carolina, delivered an illustrated lecture before the Wake County Medical Society on the evening of October 15, 1913. Basing his remarks on a study of the cases observed in this State in the past seven years he urged that in view of the very large percentage of the cases appearing in the more destitute population, that State provision be made for their care.

The Medical Society of Virginia at its recent session voted to accept an invitation to hold the 1914 meeting outside the State in Washington, D. C. The following officers were elected: President, Dr. Stephen Harnsberger, Catlett, Va.; secretary, Dr. Paulus A. Irving, Farmville, Va.; treasurer, Dr. Mark W. Peyser, Richmond, Va.; Members House of Delegates A. M. A., Dr. W. E. Anderson, Farmville, Va.; Dr. Kirkland Ruffin, Norfolk, Va.

The annual session of the Virginia State Medical Society was held at Lynchburg, Va., Oct. 21-23 under the presidency of Norfolk's distinguished surgeon, Dr. Southgate Leigh. The meeting was well attended, a very fine program was presented, the social features pleasant, and the occasion in every way worthy of the excellent profession of the grand old State. In the selection of Dr. Stephen Harnsberger, of Catlett, Va., for its next president, the Society honored itself as well as conferred a worthy and well-earned compliment upon one of the finest exemplars of the best traditions of the Virginia profession and the general practitioner of the State. A cultured, studious general practitioner of many years successful work in a small town, his elevation to the honored post of the presidency is a fitting illustration of the fact that most State Medical Societies in the South usually confer distinctions upon the men who are our truest representatives of real worth and character without considerations of place of residence. We venture no practitioner of

Virginia appreciates more fully the conditions and needs of the State Society or of the medical profession, nor could any be more insistently persistent in his efforts to promote and develop every proper professional and society interest during his term. We felicitate the society on the successful year and delightful session it has just held with Dr. Leigh as the official head, and we also congratulate the society on the coming prospects with Dr. Harnsberger at the helm.

The recent sitting of the North Carolina Legislature performed a duty in making an appropriation of \$70,000 to complete the buildings and open the State School for the Feeble Minded, upon which work was begun in Kinston, N. C., some two years ago. Originally the State appropriated \$60,000, later adding \$10,000, which was supplemented by donations from the citizens of Kinston and Lenoir making (as estimated by the legislative committee which recently visited the plant in process of erection near Kinston) the present actual value of the State's investment in the institution fully \$120,000. In the Legislature some three years ago, State Senator Dr. A. A. Kent, of Lenoir, N. C., and Representative in the House Dr. J. A. Gordon, of Jamestown, N. C., were most indefatigable in their efforts for the initial State appropriation. In this effort they were most ably aided by Dr. Ira M. Hardy, who later became Secretary of the Board of Trustees and Superintendent of the Institution. For two years now Dr. Hardy has given his whole time to this work, and now that additional funds are available the buildings will be completed and the school opened in 1914 under his care. This adds another to North Carolina's splendid philanthropies and reflects credit upon the gentlemen who have so zealously worked to secure it for the feeble minded children of the State, and it alike marks the humanitarian spirit of our people in making provision to afford as great a development as may be possible for these unfortunates. In turn, citizens of the State who believe that at least a portion of the consideration given the breeding of approved strains of lower animal life, might well be shown in the rearing of human beings, will in time expect vasectomies and fallocotomies to become approved courses in the school's curriculum.

A special session of the State Board of Health of North Carolina, which by recent enactment of the Legislature becomes the Board of Trustees for the State Sanatorium for the Treatment and the Prevention of Tuberculosis, was held at Montrose Oct. 24, and arrangements made to open the Sana-

torium Dec. 1st. From a number of applicants for the position of Medical Director, the Board elected Dr. Wilson Pendleton, a native of Virginia, and a graduate of and former instructor in the University at Charlottesville, Va. He comes to his work in the Sanatorium with the highest recommendations from his former professors and associates in the University, and from the authorities of the State Institutions for Tuberculosis of Delaware and Connecticut where he worked for three years, as well as letters of almost fulsome eulogy from Dr. Larrason Brown and other noted Phthisiologists of Saranac Lake, N. Y., where he spent a year.

The Sanatorium has space for more than 100 patients, and indications from the applications now coming in suggest that it will soon be filled after the opening. Meanwhile the reporting of tubercular patients by physicians throughout the State to the State Board of Health, and the Correspondence School it is proposed to conduct with all desiring such assistance, and the high grade work naturally to be expected of Dr. Pendleton and his associates, naturally place North Carolina in the front rank of States doing advanced work in tuberculosis.

The success of Dr. J. W. Neal, of Monroe, one of North Carolina's most distinguished practitioners, in other lines than medicine, is evidenced by the tobacco crop, valued in excess of \$25,000, raised on his Union county farm this year.

The Rocky Mount Sanitarium, the new private hospital of Drs. Lane, Staley and Kernegay, at Rocky Mount, N. C., was opened with appropriate exercises on Oct. 25th. The building is commodious, well equipped and should meet a long-felt want in the community, being in thoroughly capable and efficient hands.

Dr. J. D. Croom, of Maxton, N. C., who has been seriously ill for some time has recovered and resumed practice.

Dr. J. T. Borden, of Beaufort, N. C., has been appointed as Assistant Surgeon in the United States Navy and leaves for the preliminary course of instruction in the college in Washington, D. C.

Under direction of a committee of the progressive Buncombe County Medical Society Asheville will inaugurate a systematic inspection of its public schools in the near future.

The published reports of the Asheville, N. C., police inspection of physician's prescriptions for medicinal alcoholic intoxi-

cants during the past fifteen months show a little more than twelve thousand prescriptions were filled in Asheville drug stores during the period mentioned. The quantities ranged from a few ounces of brandy to a barrel of beer.

Dr. Mason Brawley, formerly of Mooresville, N. C., who has been spending the past two years in special study, will locate in Salisbury, N. C., Nov. 1st, where he will be associated with his brother, the well known oculist, Dr. R. Vance Brawley.

Trustees of Rex Hospital, Raleigh, have named November 7th as "Donation Day," and a special effort will be made to raise funds for the institution.

Drs. Glasscock & Tucker, two osteopaths of Raleigh, are completing an 18 room building which it is announced in the daily press "will be the first sanitarium in Raleigh and will give medical and surgical osteopathic treatment."

The exhibit of the State Board of Health at the State Fair was a most noteworthy attraction and surrounded constantly by an interested throng. The press of the State were unanimous in their praise. The leading newspaper at the Capitol city stating "no exhibit has attracted so much attention, or excited so favorable comment, or made so lasting an impression upon the minds of the tens of thousands of spectators as that of the State Board of Health. It commanded the attention and gripped the interest of the passer by as did nothing else. Such an exhibit is necessarily far-reaching in its effect, and the truth of sanitation and hygiene so forcefully presented will be remembered when all else has been forgotten of the Fair and its exhibits."

The hundred miniature homes electrically lighted and the fading of the lights illustrative of preventable deaths, the graduated rows of tombstones of similar import, the tolling bells showing the deaths from tuberculosis, the bold showing, easily read placards showing the quackery in "patent" medicines, and the open denouncement of the "Oxyfather" (though its promoters had the brazen effrontery to have an exhibit across the aisle from the Board exhibit), all this with handing out of thousands of health tracts, rendered the exhibit a source of great instruction. And last, but by no means least, was the "Better Babies Contest" in which more than 400 babies were entered, and critically examined by physicians and their strong and weak points carefully scored. Prizes of the value of more than \$600 were awarded, being the gifts of interested philanthropists.

BOOK NOTICES.

Obstetrics. A Manual for Students and Practitioners. By W. P. Manton, M.D., Professor of Obstetrics and Clinical Gynecology, Detroit College of Medicine, Detroit, Mich. Second edition, revised and enlarged; including selected list of State Board Examination Questions. 12mo, 292 pages, with 97 engravings. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

This little volume fills admirably the twofold purpose for which it was created, viz., a convenient manual by which the physician can quickly refresh his memory, and an excellent means by which the student can review his course on obstetrics in preparing for examination. The questions appended to each chapter will be found a strong mental stimulus. The revision for this new edition has been so thorough that it has amounted virtually to a re-writing, so that the book is really a new one. It is exceptionally well illustrated, and is typographically all that could be desired. Its large circulation is apparent in the unusual value which the purchaser receives.

Treatment of Internal Diseases. For Physicians and Students. By Prof. Norbert Ortner of the University of Vienna. Edited, with additions, by Nathaniel Bowditch Potter, M.D., Assistant Professor of Clinical Medicine at Columbia University (College of Physicians and Surgeons) New York; Visiting Physician to the New York City Hospital, and to the French Hospital. Translated by Frederick H. Bartlett, M.D., Instructor in Children's Diseases at Columbia University, and Attending Physician to the Babies' Hospital. Second Edition in English. Revised and re-set from the fifth German edition. Philadelphia and London: J. B. Lippincott Company. Price, \$5.00.

This is the second English edition of that splendid volume of Professor Ortner's entitled "Treatment of Internal Diseases." It has been entirely revised and re-set and Professor Franz, of Vienna, has entirely re-written and very strikingly improved the chapters upon children's diseases. Throughout the book, the author emphasizes the importance of the mechanical, dietetic, climatic, hydrotherapeutic, and other extra-medical methods, with judicious reasons for those selected, and follows these with a discussion of the applicability of certain drugs, their respective advantages, disadvantages, and limitations, adds useful prescriptions from his own experience and that of others, and leaves the reader better

armed to meet etiological indications and the various contingencies which arise and require symptomatic treatment. Copious notes have been added, thus contributing further therapeutic resources from authoritative American and English clinicians. The editor has also re-written several sections and added a chapter upon the treatment of neurasthenia.

There are many things about this book which make it very valuable. It is written in an attractive and lucid style, is systematically arranged, showing how thoroughly and carefully it was arranged, and profusely illustrated.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume VI. General Medicine, edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Series 1913. Chicago: The Year Book Publishers, 327 S. LaSalle St.

It gives us pleasure to call attention to another issue of the Practical Medicine Series. These volumes are issued at monthly intervals and cover the entire field of medicine and surgery, each volume being complete for the year prior to its publication on the subject of which it treats. The arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

The price of this volume is \$1.50 and the price of the series of ten volumes \$10.00.

A Text Book of Physiology. By Isaac Ott, A.M., M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia; Ex-Fellow in Biology, Johns Hopkins University; Consulting Neurologist, Norristown Asylum, Penn.; Ex-President of American Neurological Association, etc. Fourth Edition, revised and enlarged. Illustrated with 434 half-tone and other engravings, many in colors. Philadelphia: F. A. Davis Company, Publishers, 1913.

In this the fourth edition, several old cuts have been removed and twenty-four new ones inserted. Twenty more pages have been added. Plates showing the movements of the stomach and intestines in man by the Roentgenkinematograph have been given and described according to the latest observations of the Munich School. These

cuts have not appeared in any English textbook of physiology. The chapter upon Internal Secretions has been re-written to a large extent. The pineal gland and the gonads have been considered. The correlation of the ductless glands has been explained according to the recent experiments upon this subject. A description of the string galvanometer has been given. Electrocardiograms of the normal heart and of the heart in Stokes-Adams disease have been described. The centers of localization of motion in the cerebellar cortex have been indicated. The new test of Abderhalden's for pregnancy has been explained. The increase of cholesterol in pregnancy has been noted. The researches from the Medico-Chirurgical Laboratory upon the exciting, inhibiting, and synergistic hormones of the milk secretion have been incorporated. The latest facts in physiology have been recognized.

This volume is one of the newest and best upon this subject. It contains 911 pages of text, is very carefully and appropriately indexed, and has a good substantial binding. The price is \$3.50 net.

Essentials of Prescription Writing. By Cary Eggleston, M.C., Instructor in Pharmacology, Cornell University Medical College, New York City. 32mo. of 115 pages. W. B. Saunders Company, 1913. Cloth, \$1.00 net.

This small volume is intended to provide the student of medicine with a succinct, yet sufficient, treatment of the subject of prescription writing. It is designed to carry him through the subject in a sequential manner, and to prepare him to construct a grammatic and proper prescription to fill any need. The book was prepared with a view of reducing the burden of the already over-worked student. The practical need has determined both the scope and the degree of detail with which any phase of the subject is considered.

Text-Book of General and Special Pathology. For Students and Practitioners. By Henry T. Brooks, M.D., formerly Professor of Pathology at the New York Post-Graduate Medical School and Hospital; Consulting Pathologist to Beth-Israel, New York City, and New Rochelle, N. Y.; Hospitals; Bacteriologist to St. Mark's Hospital, N. Y.; Member of the New York Academy of Medicine, the New York State, and West Chester County Medical Societies, etc., etc. Illustrated with 525 half-tone and other text engravings (110 in colors), also 15 full-page plates in colors, containing 40 figures. Philadelphia: F. A. Davis Company, Publishers, 1912.

This work is adapted especially for the undergraduate student as an introduction to the difficult and intricate study of pathologic anatomy, both gross and microscopic, yet the most frequent and important processes are so presented as to appeal also to the practitioner and enables him by application of the knowledge obtained from description of the various pathologic states, to interpret clinical symptoms. Many questions of diagnostic importance have been considered throughout the book. Much of the subject matter and most of the excellent illustrations contained in this very valuable volume were gotten from "Grundriss der Pathologischen Anatomie," published by Professor Robert Langenhans, of Berlin.

The price of this volume is \$6 00. There are 525 illustrations, and 1127 pages of text.

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Octavo of 425 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.00 net.

This book is based upon the annual course of lectures delivered by the author at the Jefferson Medical College. The author has, in the classification, general arrangement and descriptions, presented the subject in a simple, yet thorough manner, at the same time keeping the volume within the limits of a convenient size. Special emphasis has been laid upon the clinical pictures presented, upon prognosis, and upon treatment. The book is written primarily for the general practitioner, as it is he who first sees the patient. The psychologic interpretation of the symptoms of insanity, both interesting and fascinating, is presented, briefly, in a special part of the volume. This presentation is lucid but quite adequate to the needs of the student and practitioner.

The publishers have spared no pains to make this book attractive in every way. It is printed on good paper, has a good binding, etc.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynæcology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, with the collaboration of John A. Witherspoon, M.D., Nashville, Tenn.;

Sir Wm. Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Richard Kretz, MD., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume III. Twenty-third Series, 1913. Philadelphia and London: J. B. Lippincott Company.

The papers contained in this volume bear on the subjects of Diagnosis and Treatment, Medicine, Surgery, Medicolegal, and Electrotherapeutics.

On the subject of Surgery, we have the following papers: Interesting Surgical Cases, by P. G. Skillern, Jr., M.D.; Acute Osteomyelitis of the Lumbar Vertebrae: Death from Pyæmia, by P. C. Ashhurst, M.D., and William H. Wadsworth, M.D.; The Use of Camphorated Oil in Surgery, by P. Baudet, M.D.; Anæmia From a Surgical Standpoint, by Henry T. Byford, M.D.; The Treatment of Acute Peritonitis, by C. P. Thomas, M.D.; Suppurative Pylephlebitis, by Charles R. Robins, M.D.

All of these authors are well known and their papers are very interesting indeed.

Diseases of the Skin. Including the Exanthemata. For the Use of General Practitioners and Advanced Students. By Frederick M. Dearborn, A.B., M.D., Professor of Dermatology in the New York Homeopathic Medical College and Flower Hospital; Clinical Professor of Dermatology in the New York College and Hospital for Women; Dermatologist to the Metropolitan Hospital (Department of Public Charities, New York City), to the Flower Hospital, to the Hahnemann Hospital and the Laura Franklin Free Hospital for Children; Consulting Dermatologist to the Hospital of the New York Medical College and Hospital for Women, to the Out Patient Department of the Flower Hospital, to the St. Mary's Hospital (Passaic, N. J.), to the Jamaica Hospital (Jamaica, N. Y.). With 230 illustrations in the text. 551 large 8 vo. pages. Cloth, \$5.00 net. Postage, 30 cents. Philadelphia: Boericke & Tafel. 1913.

We have the subject of dermatology presented to us, in this book, in a very clear and concise manner. The general considerations and special diseases are arranged in logical sequence, thus emphasizing the relative importance of symptomatology, etiology, pathology, diagnosis and treat-

ment. The various conditions are described briefly and completely, the probable etiological factors presented, and the essentials of pathology given. Much space is given to a discussion of the differentiation of similar skin diseases. The author's opinion is based upon the observation and detailed records of over fifteen thousand cases of skin disease which have been studied during the past fourteen years.

This book is a very interesting as well as valuable one. It gives us a great deal of pleasure to call attention to it in this issue of the Journal.

The Elements of Bacteriological Technique.

By J. W. H. Eyre, M.D., Director of the Bacteriological Department of Guy's Hospital, London. Second Edition, re-written and enlarged. Octavo of 518 pages, with 219 illustrations. Philadelphia and London: W. B. Saunders Company. 1913. Cloth, \$3.00 net.

This book is a presentation of the arrangement in a brief and concise manner of the various methods at present in use for the study of bacteria, and the elucidation of such points in their life histories as are datable or still undetermined. The chief difference between this and the first edition lies in the fact that there are several additions—rendered necessary by the introduction of new methods during recent years.

The author has given us this book in very simple, direct language. His style of writing is very attractive indeed. The illustrations are profuse and very appropriate.

Diet in Health and Disease. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the College of Physicians and Surgeons, Baltimore; and John Rurah, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Fourth Edition, thoroughly revised and enlarged. Octavo of 857 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$4.00; half morocco, \$5.50 net.

Many changes have been made in this, the fourth, edition. A section on the mechanism of digestion has been added; the chapter on metabolism and the prescribing of diet has been largely re-written; and some tables of great practical use have been included. The portion of the work on salt metabolism has also been largely re written, and tables showing the latest additions of this subject have been added. The diet in fevers in general, and also of typhoid fever has been fully considered in new articles, and the sections on diabetes and gout have been entirely re written. Various new ideas and diet lists have been incorporated in the part of the work dealing with the diseases

with the diseases of the stomach and intestines. The chapter dealing with infant feeding has also been thoroughly revised. Many very valuable analyses have been made with regard to the composition of foods and these are here given to the general practitioner. Many tables of the composition and caloric value of foods have been included also, in order that this subject might be studied by him with less trouble.

This book is essentially what it was intended to be, a hand-book for the practitioner.

Diseases of the Rectum and Pelvic Colon. By Martin L. Bodkin, M.D., New York, Rectal Surgeon, St. Mary's Hospital, the Williamsburgh Hospital and the Howard Orphan Asylum; Late Rectal Surgeon, Bushwick Hospital. Illustrations specially drawn by Francis A. Deck. New York: E. B. Treat & Company, 241-3 West 23rd St., 1913.

In this volume, the author has simplified the descriptions of the common diseases of the colon, the sigmoid flexure, rectum and anus, and has presented them in the plainest and most direct language. Perisigmoiditis and sigmoiditis are given prominence as they describe the pathological conditions which commonly affect the sigmoid. One chapter that is of especial interest is that on "The Relation of Rectal Disease to Gynecology." This book opens the way for physicians to study these subjects as they should be studied and points out the necessity for studying them. We have given us here for the first time a detailed description of the modified Tuttle abdomino perineal operation for the removal of cancer of the rectum, and "The Tuttle three-step operation in tumors of the sigmoid colon."

We have looked over this volume of Dr. Bodkin's with unusual interest. It is a very valuable book, and any one who is interested in the subject of rectal diseases could not do better than to study what the author of this volume has to say. It is a neat volume, well indexed and contains 416 pages. There are ninety special illustrations, all of them very appropriate.

Price, cloth, prepaid, \$3.50 net.

A Practical Treatise on Medical Diagnosis. For Students and Physicians. By John H. Musser, M.D., LL.D., late Professor of Clinical Medicine in the University of Pennsylvania; formerly President of the American Medical Association, etc. New (sixth) edition, revised by John H. Musser, Jr., B.S., M.D., Instructor in Medicine in the University of Pennsylvania; Assistant Physician to the Phila-

delphia Hospital; Physician to the Medical Dispensary of the Presbyterian Hospital; Physician to the Medical Dispensary of the Hospital of the University of Pennsylvania. Octavo, 793 pages, with 196 engravings and 27 colored plates. Cloth, \$5.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The problem of diagnosis is the first one which confronts the physician every time he sees a patient, and upon it must depend the entire management and treatment of the case. For this reason the skilled diagnostician has a tremendous advantage over those who are less qualified, and his results are proportionately more successful. Every doctor therefore owes it to his patients, and more especially to himself, to establish in each case an unerring diagnosis. In no branch of medical science have the recent advances been more helpful; and in no other have they given us more exact methods. The appearance of a new edition of Musser's *Medical Diagnosis*, setting forth the entire subject in its latest development, is therefore timely. The splendid store of clinical material in the book has been carefully preserved and brought abreast of our knowledge of today. The enormous advances since the appearance of the previous edition have resulted virtually in the re-writing of the entire volume, and this has made it possible by judicious condensation to reduce the book to about 800 pages without sacrificing any of those features which contributed to the great popularity of the earlier editions. In the sections on the infectious diseases, the diseases of the cardiovascular system, the metabolic diseases, the diseases of the gastro-intestinal and the urinary systems, much new material has been incorporated. The chapter on the infectious diseases has been divided into two parts, the first containing those diseases due to vegetable organisms, the second those due to animal parasites. New sections have been added to the discussion of the disturbances of the internal secretions. A new chapter has been added dealing with the various functional tests of organic efficiency that have proved of such value in diagnosis and prognosis. The sections on laboratory diagnosis have been extensively revised. In the section on physical diagnosis many changes have been made, particularly in the division dealing with cardiac disorders, and new illustrations have been added representing the various types of arrhythmia. In its new issue Musser's *Medical Diagnosis* stands unrivaled. Its high authority is evident on every page, and it presents the most modern thought and methods throughout.

China Revolutionized. By John Stuart Thompson, author of "The Chinese," "Bud and Bamboo," etc. Illustrated with photographs and maps. Indianapolis: The Bobbs-Merrill Company, Publishers.

This is one of the best books of the year. It is of interest to business men, manufacturers and men of capital who realize the proportions the China trade will assume and would know what possibilities are afforded them in this land of rich resources; to lawyers, physicians, sociologists, criminologists and other professional men alive to the added opportunities in their particular lines among the people of the new republic; to engineers and city improvers, architects, artists, conservationists and artisans in general who now recognize the chances for profitable employment within the great wall; to teachers, missionaries, sinologues, statesmen and litterateurs who appreciate the new significance which has attached itself to their offices and understand that the success or failure of the new government will rest largely with them; and to naval and military experts who realize that the peace of a nation is dependent upon its fitness for war, and lawmakers who foresee the approaching necessity of laws to regulate the conditions which the new relations with China will impose; and to globe trotters and tourists who would know China before they journey there.

This volume is of world wide interest and one that we would advise every one who possibly can to read. It has stirred the United States, England and China. There are 590 pages of text, many and excellent illustrations, and a good index. The volume is most appropriately bound. Price \$2.50.

New Aspects of Diabetes, Pathology and Treatment. By Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. 8vo. 160 pages, diagrams and tables, \$1.50 prepaid. Lectures delivered at the New York Post-Graduate School. New York: E. B. Treat and Company.

This volume presents the author's latest views on a subject of which he is the recognized international authority. Since his previous series of lectures, given before the same school in 1905, his personal experience has included the treatment of over 2000 cases of diabetes in his clinic and sanatorium. This rich material affords data of remarkable value. The new aspects of diabetes upon which especial emphasis is laid, are the chemical knowledge of the sources of sugar within the body, the rise in caloric production and its causes, the control of sugar formation and its disturbances, the therapy of diabetes, particularly

the so-called "oat-meal treatment," and the influence of acetonuria on the treatment of diabetes mellitus. Peculiarly interesting and suggestive is the author's theory of diabetes and his diagram illustrating the metabolic relationship and interaction of the organs constituting the sugar-forming apparatus. The book should be of great value to advanced as well as elementary students, as the latest contribution from the researches of an expert in this special subject.

Our Attitude Towards Mexico Justified.

The United States occupied Cuba because we had a duty to perform in the interest of the suffering and the weak. A war that was devastating the island had been going on for three years, with increasing atrocities. We relieved a dead-locked situation in a very few days, established peace in Cuba, allowed 200,000 young Spanish soldiers to go back to their homes, and conferred a blessing upon the people of Spain as well as upon those of Cuba. President Wilson has tried to confer a blessing upon the people of Mexico by offering neighborly and disinterested counsel. He has tried to induce the opposing factions to accept our Government as their friend and unite upon some honorable way to restore order and peace. But the factional leaders are selfish and head-strong, and those who overthrew and assassinated Madero have gone too far to talk in unselfish terms about the welfare of their country. What will happen, therefore, nobody knows; and yet the patient, restrained, moderate course and tone of President Wilson and his agents have strengthened rather than weakened the ultimate power of the United States to be of practical service to the people of Mexico. The opportunity will present itself in some form, but what that form may be does not as yet appear.—From "The Progress of the World," in the American Review of Reviews for November.

Notice.

The impression has unfortunately been created that Mary Roberts Rinehart, writing under the name of Jane Bunker, is the author of a recently published novel entitled *Diamond Cut Diamond*. Mrs. Rinehart's publishers, however, declare that she did not write the story, that she knew nothing of the manuscript until it appeared in book form, that she does not know the identity of Jane Bunker, and that she is not writing fiction or anything else under a pen name. If there is a way, the publishers add, by which this denial can be made more emphatic, they will gladly follow it. The "shrewd guessers" will have to guess again.

"Jaune Bunker" is a woman, she is the author of a number of books more serious in their intention than *Diamond Cut Diamond*, she has previously written popular fiction under still another nom de plume, she is clever and brilliant and she is either married or single, but she is not Mary Roberts Rinehart.

Abstracts of the Leading articles of the month.

After-results of Operation for Uterine Displacements. Giles (Proc. Roy. Soc. Med.) finds that the general or local health of patients has been improved in 90 per cent, of cases, the position of the uterus has remained good in 96 to 98 per cent.; there have been records of sixty-two full-time confinements, with no complications that could be attributed to the operation, and including forty-seven natural labors; the uterus has kept in good position after labor in 97 per cent.; and the patients have been free of bladder disturbance or had no more than before operation in 85 per cent. of cases, 20 per cent. having actually improved. Hysteropexy is, therefore, a valuable procedure in cases of retroversion, prolapse, and procidentia, inasmuch as it is simple, safe, permanent in its effects, and not harmful in the event of subsequent pregnancy.

Hair-ball Removed from Stomach of a Child.—An unusual case of gastric disturbance is illustrated by a case reported by S. Barling (Proc. Roy. Soc. Med.). A girl seven years of age was admitted for vomiting and severe pain in the upper abdomen of two days' duration. Since an attack of dysentery four and a half years before she had been in the habit of chewing up pieces of string, tape, etc., and occasionally fragments of such things had been found in the motion. Her appetite was good up to ten days before the time she was taken ill, food being taken in normal quantity and without discomfort. On examination, a hard lump exactly resembling the outline of the stomach could be felt descending from beneath the left costal arch, and passing transversely across the epigastrium. The outline of the tumor together with the history led to a correct diagnosis. The specimen was easily removed through a longitudinal incision into the anterior wall of the stomach about 3 in. long. The opening in the stomach was closed by a double layer of sutures, and the child made an uneventful recovery. The specimen consisted of a felted mass of hair and string, the former predominating; it presented an exact cast of the stomach.

Liver Insufficiency in Scarlatina.—

Tachau (Jahrb. f. Kinderh.) presents the results of extended functional tests of the liver in this disease, including the demonstration of biliary coloring matter and its derivatives in the urine, tests for the carbohydrate tolerance and nitrogen distribution in the urine. In all the cases examined no enlargement of the liver could be made out by percussion or palpation. The author believes that a disturbance of the function of the liver exists in the beginning of scarlet fever because of the presence of a urobilinuria, alimentary levulosuria and increased excretion of amino acids. In the mild cases in which only a urobilinuria is present it is possible that we are dealing with a purely passive insufficiency resulting from an increased disintegration of red blood cells. In all cases, however, in which the nitrogenous excretory products are increased above the normal, an involvement of the liver parenchyma is present. The appearance of bile pigment in the urine as early as the fourth day is the only symptom of a functional disturbance and even in the well-marked cases the hepatic insufficiency is comparatively slight because the ingestion of 20 grams of glycochol does not interfere with the excretion of amino acids. Tachau believes that the disturbances of the liver referred to are due to a specific factor which is the etiological basis for the disease.

Functional Organic Sensitiveness to Pressure.—Hudovernig (Neur. Zentrbl.) discusses at length Mannkopf's symptom which is well recognized as a functional type of reaction, and which is characterized by an increase in the pulse rate, arising from pressure over painful areas in functional nervous diseases. Thirty five cases, in which there were painful areas from an organic basis and without symptoms of neurosis, were examined. In over 90 per cent. of these cases he found that pressure on the painful spots, instead of causing Mannkopf's sign, brought about a slowing of the pulse rate from 10 to 20 beats per minute. The Dr. recommends the application of this test as a means of distinguishing functional from organic conditions.

A New Spirochaeta Found in Human

Blood.—Chambers, in *The London Lancet*, believes that the changes in many of the glands were of the nature of inflammatory responses to some infecting agent. Upon this hypothesis she was further led to make a search for an organism of a protozoal order, as she was unable to find any sign of bacterial infection of the gland itself. In her studies she found an actively motile

spirochæta in the serum which separated from blood drawn into a small pipette. The organism is from four to thirty microns in length, may be thick or extremely thin, its curves are being constantly obliterated by its motions, the ends are usually rounded, and sometimes the ends are swollen and look like spores. The spirochetes have been seen in process of division, which takes place longitudinally. They can be stained with Leishman and Giemsa's stain, when small, red, chromatin granules are often found at their ends, or sometimes occurring along their length. Other methods of staining can be used, but the best method of finding it is in the fresh serum, examined in the dark field. It has been possible to cultivate the spirochæta in blood drawn into broth, in blood alone, and in blood drawn into molten agar. In each instance the organisms are to be found in the region of the red cells which are present. No successful subculture on artificial media has been made as yet. The organism is often very abundant in the blood drawn from a person to all appearances in full health. In forty-seven cases, including fifteen persons in health, she has found the spirochete in all but three. She offers no suggestions as to its nature or significance.

Observations on Abderhalden's Pregnancy Reaction.—Schlimpert and Hendry (München. med. Wochenschr.) mention the results of their observations in 316 cases. They divide them into two groups, the first of which includes seventy-nine cases in which a more carefully developed technic was pursued and 237 in which the original method developed by Abderhalden was employed. In the first group the pregnant and non-pregnant individuals were equally divided and in no instance was a failure noted. In the original series of tests the results were somewhat more doubtful. He says that their investigations fully confirm the claims of Abderhalden. Only those results are to be credited which have been confirmed by controls on numerous non-pregnant individuals, for with a faulty technic apparently positive results in pregnant individuals are easily possible. Observations which are not based on the most careful technical requirements have no value as diagnostic features. They found that the greatest difficulty in carrying out the test consisted in the impossibility of obtaining placental tissue completely freed of blood. It was found that this could be overcome by using a 0.9 per cent. salt solution. The experiments were limited to the diagnosis of pregnancy and only the dialyzation method was employed. The test

of the optical method was reserved for future researches.

Treatment of Inoperable Cancer or Recurrences.—Knox (Proceedings of the Royal Society of Medicine) says that in slowly growing inoperable cancer he has employed energetic x-ray treatment with satisfactory results. The method described may also be used in recurrences of considerable size. The area of healthy tissue is protected by thick lead screens. A circular area is cut out of the screen, exposing the tumor and a margin of healthy tissue. Pastille doses of x-rays are given, at first unfiltered, later filtered through one millimetre of aluminum, three times a week for several weeks. A marked reaction results and the tumor contracts. In one instance radium exposures were made over the central portion of the growth, fifty milligrammes in a filter of 2.50 millimetres of platinum were applied for six hours. The whole of the new growth was ulcerated, leaving healthy tissue behind. The resulting ulcer slowly healed, and a sound scar was obtained after about three months' treatment. This intensive form of treatment is well worth a trial in cases which do not yield to any other measures.

Ectopic Pregnancy and Intraperitoneal Hemorrhage from Ovarian Cysts.—Reinhard (Gynakol. Rundsch.) embodies his views in the following conclusions: 1. Extrauterine pregnancy is the most frequent but not the sole cause of hematocele or free intraperitoneal hemorrhage. Besides ectopic gestation, rupture of ovarian cysts must be given special consideration in cases of intra-abdominal hemorrhage. 2. Of special significance are blood cysts of the corpora lutea. These are more frequent than serous cysts, but they do not attain the same size and hence are less likely to rupture. To the cases hitherto reported the author has added two of his own. 3. Rupture of the corpora lutea or of cysts originating from them usually occurs a few days before the expected menstruation. The most frequent cause is accidental trauma. It would be advisable in the anamnesis to note accurately whether such an injury is the sole cause of the rupture or whether other factors are concerned. 4. The existence of several corpora lutea in an ovary is nothing exceptional; hence cystic degeneration of several corpora is not rare. These polycystic degenerations are more commonly associated with hydatidiform moles or chorioepithelioma, although no specific relations exist between them. 5. Cysts of the corpus luteum are frequent in tubal pregnancy, but nothing is known concerning their rupture during gestation, so that

the author is to be credited with having described the first case in which this condition complicated a tubal pregnancy.

Combined Bromide and Thyroid Treatment of Epilepsy.—Sicard (Jour. de Med. de Paris) points out that the tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet 0.1 gm. (1½ grain) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 1 gm. (15 grains), of potassium bromide are given daily at equal intervals, say at 10 a. m. and 10 p. m., apart from meals, and dissolved in half a wineglassful, or less, of water. The bromide is to be given regularly without suspending the treatment. A chlorine-free diet is enjoined, and should acne appear, the pustules are to be treated with an application of chlorinated soda solution and sulphur ointment.

Case Simulating Meningitis Due to Escape of Thread-Worms into Peritoneal Cavity Through Perforated Appendix.—Whitlocke (British Journal of Children's Diseases) reports the case of a girl, aged 5½ years, who was admitted to the hospital with the diagnosis of tuberculous meningitis. A year previously an enlarged lymph-node had been removed from the side of her neck. She seemed very ill, had a temperature of 102.4° F. and a pulse rate of 112. There was marked converging strabismus, with contraction of both pupils and some photophobia. For thirty-six hours or more she had been sick, was restless, and now and then screamed out when apparently dozing. She was very constipated, and an anæmia had produced but a small result. She slept badly and often refused food; any attempt at drinking brought out immediate vomiting. She had urinary incontinence. There was no disease of the ears or air sinuses. After two days she began to pick at the bed clothes, to throw herself about in bed in a restless, irregular manner, and to wet herself frequently. At this period, Whitlocke noticed for the first time that she kept her right lower limb fully flexed and drawn up to the abdomen, while she moved the left from time to time, often extending it. Palpitation of the lower abdomen gave the impression of increased rigidity in the right rectus muscle, and caused her to call out when even gentle pressure was brought to bear over the cecum. There was no distinct dulness on percussion anywhere.

When the peritoneum was opened a small quantity of semipurulent fluid escaped, emitting a fecal odor. An inflamed process of omentum was found covering in the an-

terior surface of the cecum and the appendix completely. In peeling the inflamed omentum from the appendix Whitlocke came on a colony of about a dozen dead thread-worms. After the appendix had been cleared and delivered through the wound it was found to possess a pin-point perforation $\frac{3}{4}$ of an inch from its distal extremity on its mesial aspect. Through the minute perforation a living thread-worm was to be seen wriggling until it finally exuded itself on to a swab held to receive it. In quick succession three or four others of smaller size, and presumably of less mature age, passed in single file through the opening. The base of the appendix was crushed and ligatured, and the organ excised according to custom. The omentum was then drawn into the wound and carefully examined, and as a result three more live worms were removed from its meshes at some distance from the inflamed and previously attached portion. In swabbing the pelvic peritoneum with hot saline in search for others, four more live ones were caught and removed. The wound was then closed. The appendix when cut open was found to be crammed full of oxyurides of all sizes and ages. The very small and immature worms greatly predominated. The mucous membrane was considerably ulcerated, especially in the immediate neighborhood of the perforation. The opening was so small that a fully grown oxyuris squeezed itself through with decided difficulty. After the operation the nervous symptoms and sickness very soon disappeared, the pulse and temperature fell to normal on the following day, and from this time on the recovery was rapid and complete.

Diagnosis of Pulmonary Tuberculosis by Complement Fixation.—Kinghorn and Twitchell (Zeit. fur Tuberkulose) say that they find that the diagnosis of pulmonary tuberculosis by the Bordet-Gengou test of complement deviation or fixation is unsatisfactory. Their technique was practically that of Wassermann and Bruck; and in all their tests they used bacillen emulsion instead of old tuberculin. The serums examined were inactivated for half an hour in a water bath, at a temperature of 55 degrees to 56 degrees. Sheep's blood was used as the antigen, rabbit's immune hæmolyisin as ambiceptor, and normal guinea pig's blood as complement. This was undiluted and usually in the proportion of 0.1 c.cm. Considerable differences in the strength of serums obtained from guinea pigs were found; and some of the serums were too weak to use. Of the thirty-eight serums examined, thirty seven were taken from the blood, and one from the pleuritic fluid of a

patient suffering from advanced tuberculosis. The serums of seven healthy persons did not once fix complement; and of eight cases of incipient pulmonary tuberculosis only three fixed complement. Of fourteen advanced cases of pulmonary tuberculosis thirteen fixed complement. Of three cases of arrested disease all fixed complement. The serums of three persons suspected of incipient disease fixed complement in every case. Of the total of twenty five patients in whom pulmonary tuberculosis was diagnosed, nineteen gave a positive reaction and six a negative reaction. In incipient cases complement fixation occurred only in 37.5 per cent. It was anticipated that the test would be positive in incipient cases by fever, because antituberculin amboceptors would probably be present. But in many such cases the test was negative. It was positive in 93.3 per cent. of advanced cases, presumably because tuberculosis substances are thrown into the system and produce antituberculin amboceptors in the later stages of the disease. The authors conclude that a positive reaction in an incipient or doubtful case points strongly to the presence of tuberculosis, whereas a negative reaction in such case is of little or no value, as tuberculosis may yet be present. They also hold that a negative reaction in a case of serious illness, in which the diagnosis is uncertain, does not necessarily disprove the presence of tuberculosis. They disagree with Michaelis and Eisner, who consider the appearance of antituberculin in patients not treated with tuberculin an unfavorable sign, indicative of progressive disease, for the three patients with arrested disease fixed complement, and seven of the patients with advanced disease fixed complement, and yet were in excellent condition and steadily improving.

Hematemesis Due to Gastric Arterio-sclerosis. -Bitot and Mauriac (Gazette des Hopitaux) draw attention to the very important group of hemorrhages due to arteriosclerosis, and in particular to hematemesis. They point out that arteriosclerosis produce painful dyspepsia, vomiting, anemia, wasting and weakness, and when these symptoms are associated with hematemesis the diagnosis from gastric ulceration and malignant disease may be one of extreme difficulty.

They report the case of a patient aged 36, who five years previously contracted syphilis. He was admitted into hospital for profuse hematemesis which was considered to be due to gastric ulceration.

Shortly afterwards he manifested signs of tabes dorsalis, and the root pains being severe, he was operated upon by Charbon-

nel, the seventh, eighth and ninth nerve roots being divided. The pains improved but vomiting continued. He again began to vomit large quantities of blood and died ultimately from exhaustion.

Post-mortem the gastric arteries were dilated and cord-like. The stomach wall was thickened and hard; the mucous membrane in many places, and in particular towards the pylorus and over the greater curvature, showed areas of hemorrhagic infiltration, of a red-violet color. The first part of the duodenum was similarly affected. The remainder of the small intestine was normal. The veins of the esophagus were dilated.

Microscopically, the vessels of the stomach were dilated and gorged with blood, and in many places they had ruptured, with effusion of blood into the surrounding glandular tissues. Even in those parts of the organ where the areas of hemorrhagic infiltration were absent, the same profound engorgement of the vessels existed.

The arterioles showed great thickening of their walls, the adventitia being in particular affected. Many manifested the changes of endarteritis obliterans, and occasionally entirely impermeable arterioles were seen.

The muscular tissue of the stomach showed atrophic changes, and there was marked fibrosis. The vessels on the outer aspect of the organ were atheromatous.

Similar lesions were found in the first part of the duodenum; the jejunum and ileum were normal.

The aorta showed only two small plaques of atheroma; radials were normal. The coronaries were markedly degenerated.

The authors point out the fact that there were no military aneurysms found as appears to have been the case in most of the other recorded cases of arteriosclerotic hematemesis; they express their agreement with Levine who stated that extreme gastric arteriosclerosis may exist, and cause death, without there being any great change in the aorta and large vessels.

The Rumpel-Lerdel Test in Scarlet Fever. -Caffarena (Brit. Med. Journ.) has given it a full trial in cases of scarlet fever, measles, diphtheria, typhoid, varicella, pertussis, etc., and is convinced that it is a valuable aid to diagnosis in scarlet fever. It is not that one does not get petechiae in some of other diseases, but that they appear much more readily, more constantly and more definitely in scarlet fever. It appears to have some more or less direct relation to the presence of the rash, for in cases of scarlatina tested at various periods of the disease, it always appeared more readily whilst the rash was out than in later periods.

When it appeared in measles the appearance was much later in coming on, and the petechiæ were grouped differently, more like the grouping of measles than that of scarlet fever. In diphtheria it only appeared with difficulty and after long stasis. In his experience in scarlet fever the petechiæ appeared within half a minute of the application of the ligature; moreover, it never failed to appear in scarlet fever cases. The writer has not had any opportunity to apply the test in scarlatinal sore throat without exanthem; possibly it might fail there, as it is so closely associated with the appearance of the rash.

Diphtheria Bacillus Carriers and the Staphylococcus Pyogenes Aureus.—Bell (Lancet Clinic) recommends that a fresh staphylococcus culture in broth should be made every morning and that no culture over twelve hours old should be used. The physician should first swab the throat with the culture, the rest of which should be placed in an atomizer and used as a spray by the patient himself every two hours during the day. Such treatment will substitute days instead of weeks in bringing about a negative result. Two successful cases in adults are reported.

Result of the Combined Method of Treatment of Gonorrhea.—Osburn (Jour. of the Royal Army Medical Corps) suggests the combined treatment of gonorrhea. The measure adopted for the first ten days was the usual one, viz., solutions of potassium permanganate or protargol for irrigations. This was followed by two or more injections (200 millions) of stock gonococcal vaccine at short intervals, while irrigation with a quadruple sulphate solution containing the sulphates of copper, iron, alum, and zinc was substituted for the protargol, and in obstinate cases injections of solution of iodine or emulsions of cinnamon oil.

The results have been very satisfactory both from the point of view of shortening the period under treatment and the absence of relapses.

Taking the last 100 consecutive cases of gonorrhea it was found that in sixty two consecutive cases treated in the old way the average period in hospital was no less than fifty-four days, whilst in the consecutive thirty-eight cases which had the combined treatment the average period in hospital has been only twenty-six and a half days, and what is even more important, there has not been any readmission or relapse in these latter cases.

The only drugs given by the mouth have been methylene blue and urotropin.

Effect of Hygienic Surroundings on the Morbidity and Mortality in Pneumonia Following Measles.—Maier

(Munch. med. Woch.) gives an example (rawn from the records of the Universitäts-Klinik of Munich to show how much difference occurs in the morbidity and mortality of pneumonia of measles when radical changes are made in the hygienic surroundings of a hospital. The contagious wards of the hospital were torn down and rebuilt during the service of the author. In the old, dark, ill-ventilated and crowded buildings the mortality was about twice as great as in the new well-ventilated, light pavilions erected. Before the change the percentage of complications in measles in the nature of pneumonia, lobar or bronchial, was 36.9; afterward it was 20.7. The attending physicians and the methods of treatment were the same in the two periods. Among the children having measles in the earlier period there were more who had rickets or other intercurrent diseases or who were merely weak, than in the later period. The sanitary conditions of the new pavilions were much better than in the old buildings, where the toilets were in close proximity to the beds. It seems clear that the improvement in the results was due to the improvements in hygiene and sanitation that were made in the institution.

Treatment of Pulmonary Tuberculosis in the Child by the Method of Ferrier.

—Galliot (Arch. de med. des enf.) gives his results in children unable to leave the poorer quarters of Paris for the country, when treated by the remineralization of Ferrier. The children treated were in the first and second stages of pulmonary tuberculosis, or had tracheobronchial adenopathies. The remineralization is accomplished by the administration of a mixture of carbonate and phosphate of lime, chloride of calcium, calcined magnesia, and arrhenal, given in powders proportionate to their age, three times daily for months. He also gave cod-liver oil because in its composition it has lecithin, and organic phosphorus, iodine, and bromine assisting in remineralization. The little patients treated by this method all were benefited by it. Two typical histories are given in detail. The Dr. finds that the pulmonary lesion was benefited by the treatment, although cicatrization has not yet been obtained and there must be some reserve as to the ultimate results, still there has been a complete arrest of the development of the disease. The general condition has much improved, the loss of flesh and cachexia have ceased; weight has increased and growth has gone on regularly. He recommends this method of treatment which is applicable among the poor who cannot go to the country or undertake expensive treatment.

Ethyl Chloride in Cutaneous Epithelioma.—Seidelin (London Lancet) has obtained good results in rodent ulcer and in other forms of well-delimited cutaneous carcinoma by freezing with ethyl chloride. Application is easy; no special training or special apparatus is required; there is no inconvenience to the patient, and very little pain. The spray may be applied every second or third day. When in Mexico some years ago the author treated two cases in this way; he recently revisited that country and saw both patients, who were well, and had not had a return of the trouble.

The Albumin Reaction on the Sputum in Pulmonary Tuberculosis.—Fullerton (Glasgow Medical Journal) says that the examination of the sputum of a large number of patients shows that appreciable quantities of albumin can be detected in the sputum of sufferers from pulmonary tuberculosis. Albumin is also occasionally found, though much less frequently, in acute bronchitis and in pneumonia in the febrile stage and in the stage of resolution, and in bronchiectasis. Albumin was not found at all, or in minute quantities, in the sputum of cases of bronchial "catarrh," in the resolving stage of acute bronchitis and pneumonia, and in chronic bronchitis.

Treatment of Heartburn in Pregnancy.—Hart (Guide to Midwifery) states while heartburn is a very common symptom in pregnancy, it demands attention, since there are always suspicions that it may prove a persistent condition. It may also indicate that in the later stages of pregnancy albumin will appear in the urine.

The patient should be given ten drops of the B. P. saccharated lime solution in each glass of milk she takes. The lime solution in question is made by shaking calcium hydroxide with a solution of refined sugar and allowing the excess to settle, and contains the equivalent of about eight grains (0.5 gramme) of lime in each fluid ounce (30 c.c.).

The following preparation should also be administered:

R Bismuthi subnitrat., . . . gr. x (0.6 gramme);
Sodii bicarbonatis, . . . gr. vi (0.4 gramme);
Pulveris cher., . . . gr. ii (0.13 gramme);
Fiat pulvis. Mitteleales no. xxiv.

Sig.: One powder, thrice daily after food, in a wafer moistened with water.

Treatment of Cardiac Disturbances in Chronic Dyspepsia.—Oppenheim (Progres medical) discussing the treatment of complaints such as palpitation, intermittences, tachycardia, bradycardia, pseudoanginal attacks, etc., advises, in the first place, strict dieting according to the form of digestive disturbance present, the reduction

of starchy foods to a minimum, and the taking of a light evening meal. Constipation must be prevented. If necessary, a teaspoonful of the following preparation may be taken in a little water at bedtime:

R Fluidextracti frangule, }
Fluidextracti rhamni } aa ʒ vii 25 grams);
pursianæ, }
Glycerini, ʒ x (40 grams).
Misce.

A cool moist compress, covered with some impervious material, may be left upon the epigastric and precordial regions overnight; or, a compress moistened with alcohol may be applied morning and evening for half an hour. One of the following pills should be taken at night:

R Extracti hyoscyami, } aa gr. 4-5 (0.05
Fluidextracti valerianæ, } grammes).
Zinc oxidi,
Fiat pillula No. i.

When cardiac discomfort appears, the following ointment, recommended by Robin, should be lightly rubbed over the precordium:

R Veratrine, . . . gr. iiss (0.15 gramme);
Extracti opii, . . . gr. x i 0.75 gramme);
Olei terebinthinæ rectifi-
cati, . . . ʒ ss (2 grammes);
Olei menthae pip-eritæ, . . . ʒ i (30 grains);
Adipis lanae anodisi, . . . ʒ i (30 grammes).
Misce. Fiat unguentum.

The patient should then take every hour, until the attack ceases, a tablespoonful of a sedative preparation:

R Potassium bromide, . . . each ʒ iiss (6 grams);
Cherry-laurel water, }
Syrup of ether, . . . ʒ i (30 grams)
Valerian distillate, . . . ʒ iiss (10 grams).
Mix and make into a solution.

The syrup of ether contains two per cent. of ether and five per cent. of alcohol; the valerian distillate is made by macerating one part of valerian with eight parts of water for twelve hours, distilling, evaporating to four parts, and filtering.

Fatal Late Hæmorrhage After Tracheotomy in Diphtheria.—Lallemand (Mittel. a. d. Grenzgeb. der Med. u. Chir.) records six cases from literature and the following three personal cases: (1) Boy, aged three years. Three days after tracheotomy the tube was removed, but owing to a fresh attack of dyspnoea tracheotomy had to be performed again eleven days later. In another four days the wound was dilated and granulations were found on the anterior wall of the trachea below the incision, a plug of iodoform gauze was inserted and the wound partly closed. A week later sudden hæmorrhage occurred and proved fatal in two minutes. The necropsy showed death to be due to aspiration of blood into the lungs from an erosion of the innominate artery which communicated with the second

and lower tracheotomy wound. (2) Boy, aged two years. Low operation performed. Tube removed in two days. On ninth day violent cough and severe hæmorrhage which ceased spontaneously, but recurred three hours later and proved fatal, death being preceded by convulsions. Postmortem an erosion of the arch of the aorta was found between the carotid and innominate communicating with the trachea. (3) Girl, aged five years. Low operation. Fourteen days later hæmoptysis and death in half an hour. The necropsy showed erosion of the innominate artery.

Chronic Arthritis.—Jones (British Medical Journal) says the general tendency to consider chronic arthritis as of a cryptogenetic infectious origin finds support in the therapeutic experience of the writer. Twenty consecutive cases are reported which clinically suggested a streptococcal origin, although the bacteriological examination was negative. The cases were, in the majority of instances, of long standing; they had resisted general therapeutic measures; and no source of infection was clearly indicated. Effusion into joints was rare, and the fluid when removed by puncture was invariably sterile. Blood cultures were also sterile whenever investigated. For various reasons streptococcal infections were suspected, and the patients were accordingly treated with vaccines made from streptococci obtained either from the mouth, in cases of oral sepsis, from the urine, or from the feces. Eight out of 20 unselected cases gave strong therapeutic evidence that their arthritis was due to infection by streptococci chiefly derived from some part of the alimentary tract.

Treatment of Pruritus Vulvæ.—Stein (Urologic and Cutaneous Review) lays stress on the fact that neither water nor alcohol should be used in the preparations prescribed. The writer forbids patients to bathe, wash, or douche the affected parts until after the condition has improved. Instead of water he advises the application of olive oil, to be carefully repeated after each act of urination or defecation. This should be followed by the use of an ointment:

R Cocainæ, }
Mentholis, } aa gr viiss (0.5 gramme);
Acidi salicylici, }
Adipis lance-hydrosi, } 3 iss (50 grammes).
M. ft. unguentum.

This should be applied in a thick layer on gauze, which is to be held in position by a T binder. To relieve itching, the placing of an icebag in contact with the parts, to remain over night, is also often effectual.

If causes such as diabetes, icterus, circulatory disease and parasites can be excluded,

and if there is fluor and hypertrophy of the cervix, curettage and if necessary amputation of the cervix should precede the use of the local measures already referred to.

It is of great importance, also, to see that the patients have sufficient sleep and to relieve their extreme nervous excitability. Hypnotics may be used for the night, while during the day the following bromide mixture may be given:

R Potassii bromidi, { aa 3i (4 grammes);
Sodii bromidi, {
Ammonii bromidi, } 3 ii (8 grammes);
Aque destillate, q s.ad. 3 vii (200 grammes).
M. Sig.: One tablespoonful three times a day.

New Operation for Radical Cure of Indirect Inguinal Hernia.—Bates (Northw. Medic.)

says the hernia is approached from the peritoneal side. The first step is the making of an incision about two inches long, parallel with and about one inch from Poupart's ligament, the lower end reaching a point midway between the anterior-superior spine of the ilium and the spine of the pubes. The fascia of the external oblique is divided in the line of its fibers and retracted, when the arching fibers of the internal oblique muscle come into view. This also is divided in the line of its fibers and retracted. The abdominal cavity is now opened by an incision running from above downwards in the same direction as the skin incision, through the fascia of the transversalis muscle and the parietal peritoneum. It is usually more convenient at this point to place the patient in the Trendelenburg posture. The second step is the locating of the neck of the sac, and if it contains intestines or omentum they can be quickly reduced by traction and separated by blunt dissection with the aid of gauze over the finger. The sac will usually evert into the abdomen and can be returned to the canal after the adhesions have been broken up. In most cases of long standing, and in some recent cases, the internal ring will be found faced against the external ring or external to it and may be hard to recognize. It can best be caught in a hemostat by first placing a finger in the sac, after which the ring is easily drawn into the incision. The vas deferens can either be seen or palpated, usually at the junction of the lower and inner quadrant. After placing one or two more hemostats on the margin of the ring a purse-string suture of No. 3 plain catgut, threaded on a non-cutting needle, is passed around the circumference of the sac and, engaging the fascia of the transversalis as it forms the ring, except where the vas deferens is encountered, it is excluded externally from the stitch. The purse string is drawn tight and tied,

which closes the ring with the exception of a small opening left for the vas. The next, or third step, consists of passing the needle, threaded on one end of the purse-string, from within outward through the parietal peritoneum, fascia of the transversalis, and some of the red muscle on one side of the incision. The other end of the purse string is then threaded on a needle and is passed through the same tissues as the former stitch on the opposite side of the incision. The two ligatures are then tied tight. This draws and holds the ring firmly against the parietal peritoneum. In the next step one end of the purse string, still threaded on the needle, is passed through the red muscle, fascia and peritoneum of one side of the incision, catching what is now the superior portion of the ring, and it is then passed through the same tissues on the opposite side of the incision. This, when drawn tight, faces and holds the ring firmly against the peritoneum after the manner of a vertical fixation of the uterus. The peritoneal incision is closed by a continuous stitch with the same suture. The other end of the purse string is now used in closing the muscular incision. The remainder of the wound is closed in the usual manner.

Treatment of Purulent Peritonitis.—

Propping (Deut. med. Wochenschr.) reports on the method of treatment in vogue in Rehn's Clinic and distinguishes three groups of cases of peritonitis: 1. Affecting the right side of the abdomen and pelvis; 2, the right and left side up to the transverse colon, and 3, the entire peritoneum. The procedure recommended is as follows: 1. In circumscribed peritonitis (group 1), a sufficiently long incision in the right side with appendectomy and removal of the exudation by local flushing, drainage of Douglas' pouch, suture of the abdominal incision except the drainage opening, and the Fowler position. 2. In progressive peritonitis (groups 2 and 3), an adequate incision in the median line, removal of the appendix, small counter openings in the right and left side near the spine, drainage of Douglas' pouch, general irrigation of the abdominal cavity with saline solution, suture of the abdominal wall, leaving an opening for drainage, and the Fowler position. The clinical symptoms, particularly the extent of reflex tension or pain on pressure, usually reveal before operation whether the peritonitis is circumscribed or progressive. The most important feature in the method is considered to be the incision in the median line, which permits of a thorough view of the interior of the abdomen and facilitates irrigation. No harm is done by even a thorough eversion if saline solution is freely

employed. Irrigation with this solution has decided advantages over the dry treatment, and should be resorted to even in mild cases, since it prevents extension of the peritonitis. The ileocecal region should be freely exposed, so that the irrigating fluid can readily flow out. To prevent unpleasant complications, such as intestinal obstruction, the drain should be carefully passed into Douglas' pouch and along the pelvic wall. In the last two years in 352 cases of peritonitis there were 104 of appendicitis. In 43 of these the peritonitis was on the right side, with recovery in all; in 42 it was on both sides, extending as far as the colon, and in this group there were 10 deaths, a mortality of 24 per cent. On the other hand, in cases of diffuse peritonitis, 19 in number, there was a mortality of 9 (47 per cent.). The chief complications in the after-treatment were stitch abscesses of the abdominal wall, which occurred in about two-thirds of the cases.

Dehydration Treatment of Bronchitis.

—Singer (Deut. Med. Woch.) reports several cases of bronchiectasis, fetid bronchitis, bronchial asthma, and abscess of the lung treated by systematic reduction of fluid in the diet. This treatment has long ago been recommended in acute coryza, but its advocates pushed it indiscriminately till it fell into disrepute. A too rigorous enforcement of the treatment not only is generally harmful, but it even fails to give relief locally. The author prescribes a rich and varied diet, and begins the reduction of fluid gradually. He allows 230 to 400 c.cm. of water, milk, or soup every day for the first two or three days. Thirst is relieved by sucking a lemon, rinsing the mouth out with a dilute solution of eucaine, or taking a little opium. Twice a week, days of grace are allowed, when 1,200 to 2,000 c.cm. of fluid are given. During the treatment, which is usually kept up for four to six weeks, the patient first loses and then gains weight, and is heavier as a rule after than before the treatment. Besides the regulation quantity of fluid, a considerable amount is present in the cheese, vegetables, and stews prescribed. But though the treatment is not very heroic, it is contraindicated by renal disease or tuberculosis. The effect of the treatment is continuous after its conclusion, and, though its repetition may be necessary, the intervals between each course can be prolonged till further treatment is superfluous. This is the case both with functional disturbances of the bronchi and fetid bronchial secretion with definite lesions of the bronchi. The author gives a detailed account of nine cases illustrated by charts. One patient, a man aged 56, had suffered

from cough and profuse expectoration since he developed bronchial catarrh four years earlier. Emphysema, diffuse bronchitis, and prolongation of the expiratory phase were observed. About 320 c.cm. of sero-purulent sputum were expectorated daily. Under the treatment this fell to 40 c.cm. in three weeks, Turkish baths being taken every other day further reduced the expectoration till it finally ceased. This course lasted from March 24th to May 22nd. A second course was necessary from October 2nd to January 10th, when 2,000 c.cm. of fluid could be taken daily without any resulting expectoration. When the weather became cold, cough and expectoration returned, but they were less troublesome than before, and were speedily checked by a renewal of the treatment.

Spirochaetes in the Viscera of a New-Born Infant Whose Mother Had Received an Intravenous Injection of Salvarsan During Pregnancy.—Duperie (British Journal of Children's Diseases) reports the case of a premature infant born at the 7th month with pemphigoid bullae on the legs and feet. The infant died of erysipelas a month afterwards. The mother suffered from secondary syphilis and was treated with protiodide pills, and afterwards with an intravenous injection of 0.30 gm. salvarsan, six days before the infant was born. Silver preparations showed the presence of numerous spirochaetes in the infant's liver, a few in the suprarenals, but none in the other organs. Streptococci, on the other hand, were found in all organs. A few of the spirochaetes were normal in shape, but most of them irregular. The author draws attention to three points in the case: (1) The action of salvarsan on the foetus; (2) the action of salvarsan on the morphology of the spirochaete; (3) the addition of streptococci septicemia to a congenital infection with spirochaetes. The injection of salvarsan may have determined the premature labor. Similar cases have been reported by Salmon, Sauvage and others when this drug was injected in the later months of pregnancy. In some cases injection of salvarsan appears to have caused death of the foetus in utero, but in these the spirochaete was not found in the foetal organs. However, according to Sauvage, 92 per cent. of the infants are born alive and usually without symptoms of syphilis. But this is only a false security, for symptoms of syphilis soon appear, and the infants are only "whitewashed" by maternal treatment. The author attributes the irregular and atypical form of most of the spirochaetes to the action of salvarsan, not to modification of the soil by streptococci, because he has observed a case of a newly born syph-

ilitic infant, which died of septicemia, in which the spirochaetes were normal. The Dr. says that salvarsan can pass the placenta, and that it has been experimentally shown that it causes the spirochaetes to become irregular, moniliform, and finally granular, the granules becoming the prey of the phagocytes. In conclusion, he considers that the case does not prove the failure of treatment of the foetus through infection of the mother with salvarsan, because of the apparent effect on the spirochaetes. It also shows the danger of secondary infection in cases of heredo syphilis.

Constitutional Psychomotor Asthenia in Children.—Paul-Boucour (Prog. med.) mentions a condition which he believes should be differentiated from ordinary neurasthenia, although it is often diagnosed as such. In this the child has motor debility, asthenia, and inability to use his mental faculties, while in the neurasthenic state there are mental irritability, melancholy, and horror of effort. In the asthenic conditions there is no melancholy at all. The muscular inability is marked; the mental inertia is complete; the asthenic is incapable of overwork, while the neurasthenic may tire himself out. This condition is constitutional and begins in early life. True neurasthenia is never seen before the age of puberty, while asthenia may be observed much earlier. In a case described by the author a marked development, mental and physical, resulted from the administration of puriglandular extracts.

Application of Radiology to the Study of Diseases of Infants.—Vaiot (Ann. de Med. et Chir. Inf.) mentions the various organs, the condition of which can be diagnosed by means of the X-rays. They may be used in the diagnosis of pneumonia and bronchopneumonia of infants and to map out the area of the heart in the normal and pathologic condition both with the child on the back and on the side. In general this method of examination is very useful in infants, since its results are at the same time precise and rapid, and allow us to appreciate instantly the condition of the organs. Placed before the fluoroscopic screen the infant is even more transparent than the adult, for his body is less thick, especially the abdomen. The child may be placed undressed on a flat surface, and fixed there by a suspensory arrangement, so that the board may be placed vertically in front of the screen. This position is perfectly comfortable for the baby, which can eat and drink in this position, and the movements of the organs be seen during the process. In the condition of hypotrophy the child has the age of his stature. This

condition is seen in tuberculosis, or with rachitis. In exploration of the thymus the x-rays have been of the greatest value, since this gland intercepts the rays in a characteristic and special manner.

Miscellaneous.

Addison's Disease.

The author reports the case of a young man, aged 21 years, previously always healthy, in whom a rapidly developing Addison's disease, with fatal termination in eighteen days, was witnessed. The symptoms appeared in the following order: A progressive fall in blood pressure was first noted. Then there appeared muscular weakness and evidences of some form of intoxication, including vomiting. Finally, there was observed a distinct pigmentation, localized more particularly over the genitals, axillæ and mammary areolæ. There were also diffuse and more or less extensive patches of melanoderma on the abdomen and the thorax. The mucous membranes of the cheeks, palate, and tongue were deeply pigmented. Subcutaneous injections of large doses of epinephrin were given, but no lasting effects were obtained. The autopsy revealed, in addition to a former, mild tuberculosis of the lung, complete caseation of the two adrenal glands, with marked hypertrophy of an accessory adrenal, but no change in the solar plexus.—Lippmann, *Medizinische Klinik*.

Heart Disease.

From inquiries made by the author, cardiac cases with edema, cases with anginal pains, and cases where cardiac disease is secondary to renal disease do not seem to be improved by the ingestion of sugar. In a case of general paresis in which the pulse was failing, the author did not find it to have any effect. In another case, however, he believes that the patient's life was saved by it. A woman, aged 77 years, who had had pulse irregularity for some years, developed a bad heart attack, with rapid, irregular, feeble pulse, cyanosis, and attacks of paroxysmal breathing. There was no edema. Inhalation of amyl nitrite gave temporary relief, but the condition then continued for some days, the patient steadily getting worse in spite of digitalis, strychnine, dry cupping, leeching, and frequent inhalations of oxygen. One day she seemed to be dying; in the evening it appeared doubtful if she would live through the night. The author ordered some lumps of ordinary white sugar to be given in milk, and added some syrup to the patient's medicine, in-

structing the attendants to give her four ounces (120 Gm.) of sugar during the night. In the morning the patient was found very weak, but less cyanosed and with a stronger, slower pulse. Digitalis had been omitted, as well as digitalin, as these had not had any effect. Four ounces of sugar were ordered during the ensuing twelve hours, and after that it was continued in smaller quantities for some weeks. The patient made slow but steady improvement. She gained strength, and at the time of writing was able to go out into the garden for a few minutes and to walk up and down stairs.—Denyer, in the *London Lancet*.

Treatment of Nervous Vomiting in Infancy.

Rosehaupt (*Deut. Med. Woch.*) points out that the etiology of nervous vomiting in childhood is still obscure, and that it occurs both among breast fed and artificially-fed infants. It is often unaccompanied by other digestive disturbances, is of an explosive character, and ceases when fats are withheld. In many cases the vomiting is apparently due to a local irritability of the stomach excited by contact with food. This hypothesis has led to the use of local anesthetics, and cocaine has been given with the food. But it is a dangerous drug, idiosyncrasy to which may cause alarming symptoms. Besides, it does not act satisfactorily as a local anæsthetic in such cases, for it is absorbed too quickly; and its prescription with food must naturally reduce its anæsthetic action. The author has therefore replaced it with the ethyl ester of para-amido-benzoic acid, the proprietary title of which is "anæsthesin." It is practically atoxic, for more than 2 grams are necessary to induce toxic symptoms in a rabbit. A teaspoonful of a 2 to 3 per cent. solution is given in mucilage about ten minutes before meals. The drug is also useful in dysphagia due to lesions of the œsophagus and pharynx, and it is of diagnostic value in cases of vomiting in which the cause may be either central or peripheral. If it is the former it cannot be of use, whereas if the vomiting is due to some irritability or lesion of the digestive tract, the drug gives speedy relief.—*Calcutta Medical Journal*.

Laryngitis.

The following procedure is employed by the author: There is placed on the patient places himself, on the tongue 0.3 to 0.4 Gm. (5 to 6½ grains) of an absolutely dry powder of orthoform or anæsthesin. A few movements of deglutition, performed without previous admixture of saliva with the powder, cause the latter to descend to

the level of the epiglottis and arytenoepiglottidean folds. On its way it contact with the infiltrated areas or ulcerations covering the entrance to the larynx, and in a few minutes the patient is able to swallow without distress. Where the ulcers are in the interior of the larynx, however, the measure is not so effectual. The dose referred to can be repeated three or four times daily for several weeks without any inconvenience. The procedure is also recommended for cases of quinsy and after operations on the tonsils.—Hinsberg, *Journal de medecine et de chirurgie pratiques*.

The Sensory Fibres of the Phrenic.

Matheson (Review of Neurology and Psychiatry) publishes a record of some experiments to show the presence of sensory fibres in the phrenic nerve. After discussing what is known as to the anatomical connection of the nerve, he says that the suggestion that the phrenic nerve had a sensory function probably arose in the first place from the clinical side. In 1866 Falot, who was himself the sufferer, described a disorder somewhat resembling angina pectoris under the title "*De la neuralgie du nerf phrenique*." Peter (1871) was the first to consider the subject of phrenic neuralgia thoroughly, and the condition obtained greater recognition. Clinical workers accepted without inquiry the statement made in some of the older text-books—a statement in support of which no evidence was advanced—that the phrenic nerve contained sensory fibres. Henie (1871), who gives a very good account of the distribution of the nerve, made such an assertion merely upon the ground that the nerve sent fibres to the pleura, pericardium, and peritoneum, and Schwalbe advanced a similar statement without any further evidence. Experimental work had previously been done, but it was inconclusive. Sherrington, from the examination of a foetus lacking a spinal cord found that the phrenic nerve is traceable from the diaphragm up through the thorax and neck to two filaments of origin, the larger of which comes from the fourth cervical ganglion, the smaller from the fifth ganglion. Stimulating the central end of the phrenic nerve has produced a rise in blood pressure. Matheson comes to the following conclusions: (1) The work of previous observers, demonstrating the power of afferent conduction in the phrenic nerve, is confirmed. (2) Stimulation of the central end of the phrenic nerve brings about a reflex rise of blood pressure due to excitation, partly of muscle-sense fibres from the diaphragm, partly of sensory fibres from the serous membranes. Stimulation of the cen-

tral end of purely muscular nerves, such as hypoglossal and sub scapular, evokes a similar rise of blood pressure. The pleura and pericardium have apparently additional sensory fibres to those supplied by the phrenics. (3) Stimulation of the central end of the phrenic nerve brings about an increase in rate and depth of respiratory movement, a result similar to that produced by stimulating any sensory nerve. In no case was any expiratory reflex evoked; sensory impulses passing up the phrenic nerve play little or no part in the normal regulation of respiratory movements.—The Australasian Medical Gazette.

The Pineal Body.

Leonard Kidd (Review of Neurology and Psychiatry) reviews the work done and observations made in connection with the pineal body. He presents the following conclusions: (1) The facts of comparative anatomy, embryology, histology, clinicopathology, and experimental physiology, point to the belief that the pineal body is functional in all those vertebrates which possess one. (2) The pineal body is a metamorphosed organ; not a rudimentary, useless, degenerating or disappearing organ; the phenomena, which have been urged in favor of the latter hypothesis, have been erroneously interpreted. (3) The pineal body probably furnished an internal secretion; the crucial test of this may prove difficult of attainment; it has not yet been attempted. (4) So far as our at present imperfectly applied experimental studies have taught us, the pineal body of very young birds and mammals has an inhibitory action on the development of the testes and probably—through them—on bodily growth, and the appearance of the secondary sexual characters. (5) A relationship of the pineal body, with the ovaries, is suggested by certain experiments, but has not yet received confirmation from those of Foa. (6) A relationship with the pituitary and the adrenal cortex is probable, with the thyroid and thymus possible; but on these points nothing certain is known. (7) Histological studies, and also the most recent experiments of Ott and Scott on adult pinealine seem to show that in addition to the prepuberal-sexual function, the pineal body of man and other mammals has at least one other function; it is not primarily, at any rate, a sexual one; and it appears to be active either from puberty to the end of life, or from birth. (8) A true partial pineal involvement begins normally in childhood at about the age of seven years, and is normally complete at puberty; its meaning is that the prepuberal sexual function of the

pineal body has come to an end, and therefore involution occurs of these pineal elements which subserviate that function. (9) The adult mammalism pineal body seems to have definite actions on some unstriped muscles (Ott and Scott especially), and it is functionally active normally up to the end of life. (10) The neuroglial and connective tissue elements of the pineal body may have specific functions quite apart from their purely mechanical role; but nothing definite is yet known on this matter. (11) The size of the pineal body bears no relation to the size of the brain or the size of the body. (12) The great variations of the pineal body—sometimes even in closely related forms suggest that its functions vary, and are relatively greater in some than in others. (13) We are not yet in a position to say how the pineal body functionates. (14) The future of pineal physiology lies probably mainly in the hands of the experimental and chemical physiologist, to a less degree of the pathologist, and possibly to some extent of the experimental embryologist. (15) An exhaustive study of the many methods by which our present imperfect knowledge of comparative pineal physiology may be increased will be found in sections 5 and 6 of this paper.—*The Australasian Medical Gazette.*

Rectal Feeding.

The older observations on the absorption of foodstuffs from rectal enemas, based on the analysis of rectal "wash-outs," have been found by the authors to be unreliable. The daily output of nitrogen in the urine of patients given nutrient enemas of milk or eggs peptonized for twenty or thirty minutes demonstrates that almost no nitrogenous matter is absorbed. The failure of the rectum to absorb ordinary nutrient enemas is largely due to the fact that peptones are given instead of amino acids. Chemically prepared amino-acids, or milk pancreatized twenty-four hours, so that amino-acids are separated, allows of a much better absorption of nitrogenous foodstuffs from the rectum, as was demonstrated in five cases by the high nitrogen output in the urine. Dextrose is much better absorbed than lactose, and relieves the acidosis of starvation. Fat is not well absorbed; scarcely any of the fat of ordinary milk enemas is retained. The best nutrient enema consists of milk pancreatized for twenty four hours, with 5 per cent. of pure dextrose.—Short and Bywaters, *British Medical Journal.*

Pituitary Body.

The anterior and posterior lobes of the pituitary appear to serve different functions,

the anterior lobe being related to the general growth of the body, and especially of the skeleton, while the posterior lobe, which includes the pars intermedia, probably serves to promote the contractility and increase the tone of plain muscular tissue generally, as well as of the heart, and to excite the activity of certain glands, viz., the kidney and mammary gland.

It is probable that the gland produces its action by means of chemical agents or hormones which pass either directly or indirectly into the blood, and through this fluid influence other and distant organs. In the case of the pars anterior no such hormone has hitherto been separated. But there is reason to believe that the influence of this part of the gland on growth is not produced through nerves; for in the first place the pituitary receives but few nerve fibers, and such as there are mainly go to the blood vessels; and secondly, it is difficult to explain the effect of hyperplasia of the pars anterior in producing the hypertrophy of the skeleton which occurs in giants and acromegalics otherwise than by assuming that the enlarged gland is giving to the blood a greater amount than normal of a hormone which stimulates the growth of the skeleton, and probably of connective tissue generally. Such a hormone doubtless passes directly into the sinusoidal capillaries from the gland cells, which are sometimes arranged around the capillaries like the epithelium of an ordinary gland around its alveoli and ducts.

In the case of the pars intermedia and pars nervosa a definite hormone can be obtained in solution. The hormone from the posterior lobe resembles in some of its effects that obtained from the medulla of the suprarenal capsules, but it is both chemically and physiologically a different body, appearing to act directly upon the protoplasm of cells and not, as in the case of the suprarenal hormone, upon that portion of the cell with which the sympathetic fibers are connected. It is at present uncertain whether there is only one hormone present in the saline extract of the posterior lobe. It is, however, probable that the effects upon secretion are brought about by a different agent or agents from that which causes contraction of involuntary muscle.

The hormone or hormones of the posterior lobe appear to be formed from certain cells of the pars intermedia, which undergo enlargement and degeneration into hyaline and granular bodies. These bodies push their way or are forced through the interstices of the neuroglial tissue of the pars nervosa, where many of them break down into a hyaline material and granules; they eventually pass bodily into the infundi-

bulum of the third ventricle, where they are absorbed by the cerebrospinal fluid. It is probably in this way and, therefore, by an indirect path, that the hormones of the posterior lobe get into the vascular system.

Some relationship appears to exist between the thyroid gland and the pituitary. This is indicated by the enlargement of the pituitary and formation in it of colloid-containing vesicles after removal or atrophy of the thyroid. If this relationship indicates a vicarious nature in the functions of these organs it is probably one which is limited to the production of the hormones which affect nutrition, especially that of the connective tissues, since these tissues are known to be influenced by changes both of the thyroid and of the pars anterior of the pituitary. But that other tissues may also be influenced is evidenced by the symptoms produced on removal or destruction of either gland, prominent among these being defects of the nervous system.—Schafer, *Proceedings of the Royal Society of Medicine*.

Postanesthetic Administration of Glucose.

Anesthesia causes a sudden drain on the reserve supply of glycogen in the system. If the patient be not suitably fed, he begins to live at the expense of reserve fats and, to some extent, proteins. These are imperfectly oxidized, and the intermediate products resulting from incomplete oxidation are toxic. The liver, upon which develops the task of neutralizing these toxic substances, is in a state of general functional inferiority owing to the lack of glycogen. From this the authors conclude that in order to combat postanesthetic intoxications, carbohydrates must be supplied to the organism, both for prophylactic and curative purposes. Glucose (grape sugar) which is directly absorbable, is the food of choice for operated individuals. In order to facilitate its ingestion in sufficient amount, the following combination is prescribed by the authors:

R. Glucose, 3v (150 Gm.).

Tincture of nux vomica, Mviii (0.5 Gm.).

Tincture of cinnamon, M℥ (3 Gm.).

Water, enough to make 3x (300 c.c.).

M.

This is to be taken in dessertspoonful doses every half hour. Vomiting is not only not induced, but is arrested, by this solution. Where toxic disturbances have already appeared, glucose should be given freely by all routes: orally, rectally and even intravenously. Alkalies should also be administered, in conformity with the prevailing practice in diabetic coma.—

Chauvin and Economos, in the *Société de thérapeutique*, Paris.

Potassium Cyanide Poisoning.

Experiments performed by the author in rabbits showed that when four to five c.c. of a 1:10,000 solution of epinephrin per kilogram of body weight is introduced in an animal's stomach either with or subsequently to the administration of a lethal dose of potassium cyanide (0.01 Gm. per kilo.), life is prolonged, and that if the epinephrin solution is given within five minutes after the poison, and Martin and O'Brien's antidote given, or the stomach washed out within four or five minutes after the administration of epinephrin, the animal's life is saved. The epinephrin serves merely to delay the absorption of the poison, principally by its vasoconstrictor action on the vessels of the mucosa.

Calculating the dose suitable for man from the ratio of the area of his stomach to that of the rabbit, the author states that the amount used should be about 90 c.c. (three ounces) of the 1:10,000 solution, followed afterward by about 50 c.c. (1 2-3 ounces). The following procedure is advised in cases of cyanide poisoning: 1. Epinephrin to be immediately given. 2. Martin's antidote, if it be at hand. 3. Wash the stomach out. 4. Give more epinephrin. The object of the second dose is to retard the absorption of any of the poison which escapes the washing out process or the antidote. It might also be advisable to give a brisk saline purge soon afterward. The Martin and O'Brien antidote is made by mixing 33 c.c. (8¼ drams) of a 23 per cent. solution of ferrous sulphate with 30 c.c. (1 ounce) of a 5 per cent. solution of potassium hydroxide and 2 Gm. (½ dram) of magnesia. The former two are to be kept in hermetically sealed vials and mixed before taking. When the Martin O'Brien antidote is not at hand, the order of procedure should be: 1. Epinephrin. 2. Washing stomach out. 3. More epinephrin.—Jona, in the *British Medical Journal*.

Abortive and Familiar Types of Exophthalmic Goiter.

R. Dumont reports two cases of exophthalmic goiter. One of the patients was an unmarried woman aged 31 years, whose, uncle, on the paternal side, had a double exophthalmos. Her symptoms were chiefly a tremor, extreme irritability, congestion of the face, and cyanosis of the extremities although there was no marked enlargement of the thyroid gland. The second case was that of a male aged 21 years, whose mother was affected with typical exophthalmic

goiter. The symptoms in this patient were a moderate tremor, a slight enlargement of the thyroid gland, vasomotor disturbances in the skin, irritability of temper, insomnia, and a unilateral exophthalmos—La Polyclinique.

Epithelioma.

In cases of rodent ulcer and other forms of well delimited cutaneous carcinoma the author points out the efficiency of treatment by means of ethyl chloride, which possesses over the x-ray, radium, zinc ionization, and solid carbon dioxide, the considerable advantages of easy application and availability to the practitioner without special training and apparatus. The freezing effect readily penetrates to the deepest parts of a rodent ulcer, and a comparatively exact localization and dosage are possible. The ethyl chloride is sprayed on the ulcer in the ordinary way at first for two minutes, the surrounding tissue being protected with cotton-wool. The treatment is repeated on the third day following, and afterward every other day, the application being gradually prolonged until the tissues are kept white and hard frozen for five to seven minutes each time.

The well known tendency of cutaneous epithelioma to remain localized justifies the use of the ethyl chloride treatment for a few weeks without fear of metastasis. Should the treatment fail to give a satisfactory result, the affection will at any rate not have spread, but probably been considerably reduced, the conditions for another treatment having consequently been improved. The patient can attend to his business during the treatment and need take no other precaution than to keep the ulcer covered with a small aseptic dressing. There is but very little pain, lasting for a few hours only after each treatment. There is but little visible reaction of the immediate surroundings of the ulcer, and the author has seen no gangrene, though he has kept the tissue frozen for five minutes or more. Cases are reported by him illustrating the activity of the method in causing healing of the involved areas, with only a smooth, almost invisible scar as residue, and no recurrence.—Seidelin, in the London Lancet.

Ethyl Chloride.

After many years' experience with this agent the author is of the opinion that by continuous administration of small amounts of it, using a special but simple technique which he describes, general ethyl chloride anesthesia may be prolonged beyond the customary short period without any danger. The anesthetizer should have at hand one

tube of 50 c.c. or several of 10 c.c. of ethyl chloride, provided with the usual fine spray tips employed for local anesthesia. A compress or handkerchief folded to make four thicknesses, broad enough to cover the nose, mouth, and chin, is placed over the face in the form of a conical mask, the margins being closely applied to the skin surface while the center, upon which the ethyl chloride is to be sprayed, is kept a few centimeters from the tip of the nose. The spray tip of the tube is placed over the compress, the tube itself lying in contact with it and its other extremity resting on the patient's forehead. To prevent too rapid loss of the ethyl chloride, another compress is placed completely over the tube, the hand of the anesthetizer holding it, and the first compress. By drawing down the lever at the tip of the ethyl chloride tube the anesthetizer then sprays the anesthetic on the center of the compress, causing it to be inhaled regularly at each inspiration. The spraying is continued until anesthesia supervenes. If the operation is to be performed in the mouth or nasopharynx, compresses and tube are quickly removed, while if it is to involve other portions of the body, the inhalation is continued as before until the operation has been completed or a short period before this, analgesia often persisting a few minutes after the administration of the drug has been stopped. The amount of ethyl chloride generally used by the author has been 8 to 30 c.c., in a few cases 50 c.c. The longest anesthetics attempted were twenty to thirty minutes, and the usefulness of the method is probably limited to operative procedures that can be carried out within this period of time, though Bureau, using larger amounts, has been able to prolong the anesthesia even to 43 minutes—Vanverts, Bulletin de l'Académie de Médecine.

Literature and Medicine.

Ballantyne believes that there is room for a periodical that would deal with the literary aspects of medicine and the medical aspect of literature. Among the many topics that claim attention would be the question of how far a training or a partial training in medicine influenced the afterlife and the literary output of certain distinguished writers. To this group being Conan Doyle, Samuel Smiles, Goldsmith, James Hutchison Stirling, Andrew Wilson, and Gordon Stables. Another group includes men who continued to practice medicine and surgery, and who nevertheless attained positions of literary eminence. Such men were Sir Thomas Browne, Oliver Wendell Holmes, John Brown, and Mark Akenside. There were a number of literary men who

had a smattering of medical knowledge, men who had been no more than first or second-year students. To this class belonged Keats, Southey, and Abraham Cowley. Another important aspect of literary medicine is furnished by those books for medicine which are also literature. Besides, general literature has certain medical aspects. One of these is the frequent use and abuse of medical metaphors. Shakespeare was particularly adept in his medical allusions. There are works full of medical facts, such as Burton's. "The Anatomy of Melancholy," which were written by authors who were not doctors. It was said of Burton that he was "by profession a divine, by inclination a physician." John Wesley was no doctor, yet his "Primitive Physic," written in 1747, reached its thirty sixth edition in 1840. Defoe's, "Journal of the Plague Year" was written by a wholly literary man. Goethe made contributions to anatomy, physiology, and embryology.—Edinburgh Medical Journal.

Congenital Deficiency of the Cranial Vault.

Langmead reports the case of a boy, aged 4 years, in whom at the posterior part of the interparietal suture a small pulsating area, the size of a dime, could be seen and felt. In this position there was a small depression admitting the top of the little finger. At the bottom of the depression a small hole existed which apparently transmitted cerebral pulsations. The up and down movement of the scalp was noticed by the mother.—Proceedings of the Royal Society of Medicine.

The Frequency of Breast Feeding.

Thiemich calls attention to the fact that Rietschel has recently shown that in the suckling of first six to eight weeks of life a definite number of feedings is not requisite. Some of the children thrive with five feedings, others require more, sometimes as many as eight feedings in the 24 hours. The author finds that in healthy infants it is never necessary to exceed five or six feedings in 24 hours, provided that each time both breasts are fully emptied.—*Monatsschrift für Kinderheilkunde*.

Rectal Feeding.

The older observations on the absorption of foodstuffs from rectal enemas, based on the analysis of rectal "washouts," have been found by the authors to be unreliable. The daily output of nitrogen in the urine of patients given nutrient enemas of milk or eggs peptonized for twenty or thirty minutes demonstrates that almost no nitrogenous matter is absorbed. The failure of

the rectum to absorb ordinary nutrient enemas is largely due to the fact that peptones are given instead of ambinoacids. Chemically prepared amino-acids or milk pancreatized twenty-four hours, as that amino-acids are separated, allows of a much better absorption of nitrogenous foodstuffs from the rectum, as was demonstrated in 5 cases by the high nitrogen output in the urine. Dextrose is much better absorbed than lactose, and relieves the acidosis of starvation. Fat is not well absorbed scarcely any of the fat of ordinary milk enemas is retained. The best nutrient enema consists of milk pancreatized for twenty-four hours, with 5 per cent. of pure dextrose. A. Rendle Short and H. W. Bywaters, in the British Medical Journal.

Infantile Lithiasis.

Von Bokay notes that the incidence of this condition varies in different countries. In some parts of the world it is practically unknown. In Hungary and in the central part of Russia along the Volga it is quite common. An analysis of 1,836 cases shows that the disease occurs in children most frequently between the second and seventh years. There were 1,319 cases of vesical calculus, 9 of renal calculus, and 508 of ureteral calculus. In the etiology of infantile lithiasis obstruction to the urinary outflow plays a predominant role. The main obstruction is congenital phimosis and the adhesion of the prepuce to the glans.—*Zeitschrift für Kinderheilkunde*.

S. A. L. Railway Surgeons.

The twelfth annual meeting of the Seaboard Air Line Railway Surgeons' Association was held in Montgomery, Ala., on Oct. 29-30, 1913.

The officers were: Chief Surgeon, Jos. M. Burke, Petersburg, Va.; President, Surgeon J. H. Miller, Cross Hill, S. C.; First Vice-President, Surgeon H. A. Burke, Petersburg, Va.; Second Vice-President, Surgeon J. D. Ingram, McBee, S. C.; Third Vice-President, Surgeon S. R. Benedict, Athens, Ga.; Secretary and Treasurer, Surgeon J. W. Palmer, Ailey, Ga.

The order of exercise was carried out as follows:

First Day, Wednesday, October 29.

Morning Session, 10:30 a. m. to 1:30 p. m.

Call to order—Surgeon M. L. Wood, Montgomery, Ala.

Invocation—Rev. Father Dennis Savage. Address of welcome in behalf of the State of Alabama—Gov. Emmett O'Neal.

Address of welcome in behalf of the City of Montgomery—Mayor W. A. Gunter.

Address of welcome in behalf of the

County Medical Society—Dr. T. B. Moss.
Address of welcome in behalf of the Business Men's League—President F. G. Salter.
Response to addresses of welcome—Surgeon G. A. Neuffer, Abbeville, S. C.
Introduction of the President.
The President's address—Surgeon John H. Miller, Cross Hill, S. C.
Report of committee on arrangements.
Report of committee on necrology.
Report of executive committee.
Report of secretary and treasurer.

PAPERS.

"Injuries to the Lumbo Sacral Spine"—Surgeon L. S. Oppenheimer, Tampa, Fla.
To open discussion, Surgeon A. B. Croom, Maxton, N. C.
"The Sociological Limit—Sociological Reduction and Intensification"—Surgeon H. D. Stewart, Monroe, N. C.
To open discussion, Surgeon W. D. James, Laurinburg, N. C.
"Hygiene"—Surgeon J. E. Kerr, Lilesville, N. C.
To open discussion, Surgeon E. H. Pomeroy, Braidentown, Fla.
Subject to be announced—Surgeon T. J. McArthur, Cordele, Ga.
To open discussion—Surgeon R. L. Harris, Jacksonville, Fla.
"Hemophilia"—Surgeon Jack Holton, Sarasota, Fla.
To open discussion, Surgeon R. P. Epting, Greenwood, S. C.

Afternoon of First Day, Wednesday, 29th.

An automobile ride over the city and country roads was given the Surgeons, ladies and visitors by the Business Men's League from 3:00 to 5:00.

Evening of the 29th.

BANQUET.

The Seaboard Air Line Railway Co. tendered a banquet to the Surgeons, their families and guests at the Exchange Hotel. Governor O'Neal, Mayor Gunter, President of Business Men's League, F. G. Salter, President County Medical Society, Dr. T. B. Moss, Mr. Jno. W. Deese and others were some of the invited guests who were present.

Second Day, Thursday, October 30th.

Morning Session 9 a. m. to 1:30 p. m.
Address of Chief Surgeon, Jos. M. Burke, Petersburg, Va.
Address by Hon. W. L. Stanley, Portsmouth, Va.
Address by Seaboard President, Hon. W. J. Harahan, Portsmouth, Va.

PAPERS.

"Pituitrin"—Surgeon A. R. Byers, Tampa, Fla.

To open discussion, Surgeon J. G. Dean, Dawson, Ga.
Subject to be announced—Surgeon J. B. S. Holmes, Tampa, Fla.
To open discussion, Surgeon J. D. Ingram, McBee, S. C.
"The Use of Typhoid Vaccine on Railroad Employes"—Surgeon J. W. Palmer, Ailey, Ga.
To open discussion, Surgeon John W. Smith, Branchville, Va.
"Bone Grafting"—Surgeon Sam B. Little, Colbert, Ga.
To open discussion, Surgeon B. J. Wither- spoon, Charlotte, N. C.
"Conservative Surgery"—Surgeon J. E. Rawls, Suffolk, Va.
To open discussion, Surgeon H. A. Burke, Petersburg, Va.
"Tetanus Prophylaxis"—Surgeon G. A. Neuffer, Abbeville, S. C.
To open discussion, Surgeon C. C. Mack, Quincy, Fla.
Subject to be announced—Surgeon J. C. Hill, Abbeville, S. C.
To open discussion, Surgeon W. H. Born, McRae, Ga.
"Injuries to the Eye"—Invited Guest Surgeon-Oculist Paul S. Merton, Montgomery, Ala.
To open discussion, Surgeon-Oculist H. L. Myers, Norfolk, Va.
"Report of a Case of Nocturnal Epilepsy in a Railroad Engineer, Undetected for Two Years"—Surgeon Frank L. Eskridge, Atlanta, Ga.
To open discussion, Surgeon R. D. McLeod, Lyons, Ga.
"The Radical Treatment of Hemorrhoids Under Local Anesthesia"—Surgeon E. H. Terrell, Richmond, Va.
To open discussion, Surgeon Jabez Jones, Savannah, Ga.
"Neurasthenia"—Surgeon Wm. Armistead Gills, Richmond, Va.
To open discussion, Surgeon H. A. Reeves, Inverness, Fla.

Afternoon Session, 3 O'clock.

Reading and discussion of papers too late to be announced in program.
New business.
Election of officers.
Installation of officers.
The meeting was well attended and many very valuable papers were read.

Endobronchial Treatment of Bronchial Asthma.

The essayists demonstrate an endobronchial spray. In the nose and throat dispensary of the University of Koenigsberg, 24 patients were treated endobronchially with the aid of this spray or with a broncho-

scope. In addition to epinephrin treatment, a new product, Hypophysin, either combined with or without epinephrin in from 10 to 12% novocain solution were used. There was no difficulty with the application and the patients bore it well. A number of them were cured, at least for the time they were under observation. A number of others showed marked improvement. Scarcely any failures were recorded. The investigator highly recommends this method for investigation.

In the discussion of Dr. Henke's paper, Dr. Borchardt said: "I had the opportunity to examine most of the patients treated by the above mentioned method both before and after, and I am glad to confirm Dr. Henke's favorable results. Indeed, I have gained the impression that this method excels the methods of treating asthma per os, which we had used up to the present time. The result in a few especially stubborn cases which did not yield to any other treatment, was simply marvelous. The use of Hypophysin in the endobronchial treatment of asthma which Dr. Henke introduced at my suggestion instead of adrenalin or any other combination with the latter, is not far fetched. Leaving out the pharmacodynamic resemblance of the epinephrin and Hypophysin action, we know from Houssey's recent investigations that hypophyseal extracts produce a long continued ischemia when locally employed. Weiss was the first to recommend the combination of epinephrin with hypophyseal extracts. However, he did not expect a permanent result but the cases of which a report has just been given, can be regarded as permanent results."

Dr. Borchardt urgently recommends the more frequent use of hypophyseal principle in bronchial asthma.

Dr. Krause said that he treated several patients in the same manner, and is also extremely satisfied with the results of the endobronchial treatment of asthma with $\frac{1}{2}$ per cent. novocain spray.—Professor Dr. Henke, *Deutsche med. Woch.* No. 32, Aug. 7, 1913.

Ringworm.

The following prescription for the treatment of extensive ringworm of the scalp is given by A. W. Williams (*British Medical Journal*).

R Camphor..... 3ii.
Spir. vini rect..... 3iv.
Acid. picric..... gr. vii.

Sig.: Inflammable. To be painted all over the scalp twice daily. The hair is to be clipped quite close, and the scalp washed once or twice a week, and covered by a calico cap. Generally the ringworm hairs

are loosened, and come away in from ten to thirty days. A slight yellow staining of the hair may be noticeable some weeks after treatment.

Lead Colic.

After the relief of the severe pain of colic, the following is an excellent formula for the purpose of eliminating the lead and stimulating the stomach:

R Potass iodidi..... gr. xl.
Magnes. sulph..... 3j.
Tinc. nux vom..... 3v.
Aque cinnamomi q. s. ad..... 3viij.

Two teaspoonfuls night and early morning.—*Indian Medical Record*.

Lumbago.

R Salicin } aa..... gr. xv.
Potass. bicarb. }
Caffeine citrat } gr. vi.
M. ft. pulv. No. XII.

Sig : One powder four times daily.

The bowels should be kept open by means of saline purgative and patient should rest in bed, if possible.—*La Tribune Medicale*.

AutoIntoxication, Tuberculosis and Rheumatoid Arthritis.

Lane says that in a patient affected with tuberculous or rheumatoid arthritis, chronic intestinal stasis always exists and it can be demonstrated clinically and by the use of bismuth and x ray. For instance, in a case which was admitted into the Hospital for Sick Children under his care as tuberculous disease of the knee joint, the clinical symptoms of chronic intestinal stasis were absent. The administration of bismuth and radiography proved that the contents of the intestinal tract were not delayed in their progress. A Wassermann reaction showed that the child was syphilitic, and the knee reacted at once to salvarsan.—*Brit. Med. Journal*.

The Treatment of Pre-Tuberculous Stage of Consumption.

Except for the discovery of the bacillus of tuberculosis, the most interesting outcome of recent research, has been to show that the germs of tuberculosis will only grow on suitable soil, that is to say, soil which has been prepared for infection by inherited or acquired debility. It is this stage of liability to infection that constitutes the so called pre-tuberculous period, the investigation of which has revealed several interesting facts.

Thanks in a great measure to Professor Albert Robin of Paris, who made a special study of the physiological features of this pre-tuberculous period, we know that it is

characterized by a curious but striking instability of the mineral constituents of the tissues, notably the chlorides and phosphates. This tendency to phosphaturia of course is by no means peculiar to tuberculosis for in a more or less fugitive form it is met with in many morbid states, from simple dyspepsia to albuminuria. The distinguishing character of the leakage of phosphates occurring in connection with tuberculosis is its constancy. It is this constancy that constitutes its gravity, because, in the long run, it determines pronounced impoverishment of the tissues in respect of their mineral constituents.

It would be rash to assume forthwith that the amenability of the tissues to tuberculous infection is the direct, inevitable consequence of this loss of phosphates, because the inability to hold and to retain the mineral elements may, after all, be merely an outward and visible effect of the same vital weakness that creates the proneness to infection, just as the loss of appetite determines a state of debility that predisposes to infection from lack of nourishment.

However produced, and whether due to an inherited inability of the tissues to maintain their nutrition or to the disturbing influence of chronic intoxications and other causes of organic debility, the persistent phosphatic waste engenders a state of malnutrition that places the organism in a manifest condition of inferiority.

The recognition of this predisposing process affords a clear indication for treatment, and the measures that have for their object the remedying of this source of debility and the cutting short of the pre-tuberculous stage constitute the prophylactic treatment of consumption. Just as drainage and the application of lime to an impoverished land wards off mildew and blight that attack imperfectly nourished vegetables, so hygienic measures and the administration of lime salts to persons who are threatened with consumption tend to enable the tissues to resist their natural enemy.

That this is no mere theoretical conception is shown by the comparative ease with which threatened consumption, and even the incipient stage of the actual disease, can be averted or cured by appropriate treatment. Remove the cause, said Hippocrates, and the effect will disappear, and in most instances it is possible to remove the cause of the predisposition to phthisis.

But before we discuss the treatment there is another physiological factor that calls for notice, namely, the persistently low arterial tension. So constant is this low blood pressure that it is now regarded, in the absence of any other explanation, as

diagnostic of impending consumption. A young man apparently in the enjoyment of a fair standard of health, whose blood pressure is persistently below 110 millimeters should be looked upon with suspicion, although for the times being there may be no signs of pulmonary mischief accessible to the stethoscope.

The two principal features of the pre-tuberculous stage of pulmonary tuberculosis are, therefore, increased elimination of phosphates and a persistently low blood pressure.

Other disturbances of the vital processes have been noted—changes in the respiratory quotient, for instance—which likewise possess grave significance, but we need not dwell upon these, seeing that they have no direct bearing on treatment.

Inasmuch as the phosphatic waste may conceivably be due to tissue debility, it behooves us to place the organism under conditions favorable to its recuperation, and these may be summed up in the therapeutical trinity: fresh air, good food, and rest. These alone, however, may not suffice to restore the nutrition of the tissues. There is lost ground and arrears of nutrition to be made up, and it is asking too much of the jaded organism to expect it to "pay in advance," that is to say, not only to secure the adequate nutrition of the tissues which it has so far been unable to obtain, but also to restore the debit balance created by past depredations.

Medicinally the plan of campaign is already traced. We are called upon to make good the phosphate waste (and incidentally the chloride waste as well), and to stimulate the processes of nutrition by raising the blood pressure to a higher level. Higher arterial tension means freer irrigation of the tissues, freer irrigation of the tissues, in its turn, means improve nutrition. Now lime and strychnine both tend to raise the blood pressure, and if they be given in the form of phosphates, all the therapeutical indications will have been fulfilled.

Some phosphorus compounds, however, are more readily assimilated than others, and for this reason it is better to employ the hypophosphates. In order to facilitate their apprehension by the tissues the phosphorus should be administered in combination with various bases, and advantage may be taken of the opportunity to introduce medicinal tonics, such as quinine, iron, manganese, potassium, etc. Such a compound is presented in the well-known Fellows' syrup, which must have been devised in deference to the principles enunciated above, and have justified its existence by the results that follow its employment.

Its success, in all probability, is due to the fact that, by enhancing arterial tension, it enables the tissues to avail themselves of the accompanying phosphorus salts and so to reconstitute their nutrition. Under its influence, indeed, the subject gains in weight his digestion, in common with the other vital functions improves; and the stare of physiological misery gradually disappears.—(The Medical Herald, St. Joseph, Mo.)

Alfred S. Gubb, M. D., L. R. C. P. Lond., M. R. C. S. Eng., D. H. P., etc., Aix-le-Bai is, Savoie, France,

Heart Disease.

From inquiries made by the author, cardiac cases with edema, cases with anginal pains, and cases where cardiac disease is secondary to renal disease do not seem to be improved by the ingestion of sugar. In a case of general paresis in which the pulse was failing, the author did not find it to have any effect. In another case, however, he believes that the patient's life was saved by it. A woman, aged 77 years, who had pulse irregularity for some years, developed a bad heart attack, with rapid, irregular, feeble pulse, cyanosis, and attacks of paroxysmal breathing. There was no edema. Inhalation of amyl nitrite gave temporary relief, but the condition then continued for some days, the patient steadily getting worse in spite of digitalis, strychnine, dry cupping, leeching, and frequent inhalations of oxygen. One day she seemed to be dying; in the evening it appeared doubtful if she would live through the night. The author ordered some lumps of ordinary white sugar to be given in milk, and added some syrup to the patient's medicine, instructing the attendants to give her 4 ounces (120 Gm.) of sugar during the night. In the morning the patient was found very weak, but less cyanosed and with a stronger slower pulse. Digitalis had been omitted, as well as digitalin, as these had not had any effect. Four ounces of sugar were ordered during the ensuing twelve hours, and after that it was continued in smaller quantities for some weeks. The patient made slow but steady improvement. She gained strength, and at the time of writing was able to go out into the garden for a few minutes and to walk up and down stairs.—Denyer (In the London Lancet)

Ringling Second Pulmonary Sound an Early Sign of Pericarditis.

Turretini (Rev. med. de la Suisse rom.) states that a ringing second sound over the pulmonary area in the second intercostal space, which is frequently met with in diseases such as rheumatism and nephritis,

prone to be complicated with cardiac affections, is an early sign of incipient pericarditis. This fact was first pointed out by Josseland in 1894. It is not always found. Of four of the writer's cases it was absent in two. (1) A woman, aged 38, noticed a difficulty in mounting stairs, with dyspnoea. She was then attacked with lumbago, cough, and morning vomiting. A month later she was admitted to hospital. She was emaciated and presented symptoms of uræmia. The urine contained albumen, but no casts. The pulse was regular. The apex beat was in the sixth interspace outside the nipple line, and there was a systolic apical murmur (dilatation). The second pulmonary sound was ringing, and there was a distinct shock felt over the pulmonary area. The second aortic sound was well marked but less accentuated. Six days later systolic pericardial friction was heard for the first time. On the following day the friction was both systolic and diastolic. It was exceedingly loud and rough, was plainly felt by the hand, and was uninfluenced by respiration. The quantity of urine decreased and death ensued. The diagnosis—chronic nephritis and pericarditis—was confirmed post mortem. (2) A woman, aged 54, had caseating tuberculous lesions of the lungs, and was admitted to hospital with pneumothorax. During the fortnight before the fatal ending an extremely loud second sound was audible over the pulmonary area. Two days after admission faint systolic friction was heard over the pulmonary artery; it persisted during forty-eight hours and then disappeared. There were no other signs of pericarditis and the cardiac dullness remained normal. A few days before death the heart's action became irregular. The results of the necropsy are unknown. In two other cases the writer observed the onset and development of pericarditis, but in neither was the second pulmonary sound accentuated. In both the pericarditis was due to extension of inflammation from the pleura through the lymphatics to the pericardium. Josseland now claims that the discovery of the sign in the course of an acute disease, especially acute rheumatism, enables the onset of a cardiac affection—either carditis, endocarditis, or pericarditis—to be recognized before the occurrence of a murmur or pericardial friction. The writer believes its presence or absence depends on the method of pericardial infection. If infection occurs through the circulation or the numerous lymphatics which surround the pulmonary artery and communicate with the bronchial glands, inflammation will first attack the peri-infundibular area, and an increased pulmonary diastolic sound may be the first

clinical sign. If pericarditis results from direct extension from the left pleura, a pericardial friction in the apical region will probably be the first indication.

Operation and After Treatment of Fistula-in-Ano.

The author does not believe so much in the movements of the sphincter, as in adequate drainage, for the failure of fistula to heal. Excision with immediate suture, while ideal on paper, is seldom satisfactory in practice. Excision of the whole fistulous tract, leaving the wound open, is a very satisfactory method when it can be carried out without sacrificing valuable tissue or leaving too large a wound. The patient must not be left with a damaged anus or a mass of scar tissue that will cause more trouble than the fistula. Simple incision of the fistulous tract still remains the best operation.

The author points out that the sphincter should be cut in a radial direction to the anus according to the location of the fistula.

With reference to the after-treatment he considers it the most important. Dressings should be frequently changed. He always lets the patient sit in a hot bath containing a little antiseptic twice a day, thus the dressings are soaked off. Dressings are always changed when the bowels act. One of the greatest mistakes is to plug the wound, it being often the cause of failure to heal properly. He uses a light dressing of wool soaked in sterilized olive oil so that it does not damage granulations. At first the dressings are placed in the wound to prevent the skin growing over but later when the fistula is nearly healed he places a pad over the anus. Sometimes some stimulating dressing may be applied, as pure ichthyol, lotis rubra or Friar's balsam, but not too frequently. The patient should not be allowed to sit up or walk until the wound is soundly healed.—Mummery, London Lancet.

The Treatment of Umbilical Hernia in Infants.—Smester (Jour. de Med. de Paris) describes a plan of treatment that he has adopted for thirty years with great success. The hernia is reduced and the edges of the ring are approximated by the finger and thumb of the left hand, while successive strips of court plaster are applied, so that a sort of pad is built up. Then, the edges of the ring having been secured, the little pad is fortified by a strip or two of diachylon (which must not, however, touch the skin) or by more court plaster. Finally, the whole construction is secured by collodium elasticum. The advantages of this little dodge are that the hernia is well retained, that the edges of the ring are approximated, that no

hindrance is created to the play of the abdomen, and that the bath is not interfered with. Smester has not once in thirty years known it to fail.

An Analytical Study of Twenty Cases of Infantile Paralysis.—Sophian (Arch. Pediat.) says that in anterior poliomyelitis the bright and rational mental condition contrasts strikingly with that of the dull and stuporose condition in meningitis. Slight neck rigidity and a little marked Kernig phenomenon differentiate the former from the latter. In poliomyelitis the temperature drops and the general condition improves with the onset of the paralysis, but in meningitis the palsy is accompanied by high temperature. In polioencephalitis the patient is dull and stuporous, but is clear and intelligent on being roused, contrasting with the disorientation, irritability and hyperæsthesia of the meningitic. The author lays stress on Macewen's sign—a tympanitic wooden note obtained on percussion over the fronto-parietal region, denoting hydrocephalus and frequently accompanied by ataxia. Polioencephalitis differs from tuberculous meningitis, its acute onset, its frequently extensive paralysis, and comparatively unimpaired sensorium. The author had three cases belonging to the myelitic, one to the Landry type, four abortive cases, twelve polioencephalitic forms; of the latter, five were hemiplegic, and two had ophthalmoplegia. The cerebro-spinal fluid is usually clear, but sometimes bloody. Globulin is present in the early stages, and may persist throughout the disease. With the onset of paralysis it usually disappears. The cells are moderately increased in the acute stages with a high lymphocytosis, while in tuberculous meningitis there is a uniformly strong globulin reaction and a high cell-count. The fluid is always sterile in infantile paralysis.

Combined Bromide and Thyroid Treatment of Epilepsy.—Sicard (Jour. de Med. de Paris) points out that the tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet 0.1 gm. (1½ grain) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 1 gm. (15 grains), of potassium bromide are given daily at equal intervals, say at 10 a. m. and 10 p. m., apart from meals, and dissolved in half a wineglassful, or less, of water. The bromide is to be given regularly without suspending the treatment. A chlorine-free diet is enjoined, and should acne appear, the pustules are to be treated with an application of chlorinated soda solution and sulphur ointment.

Iodosyncrasy To Arsenic.

Two cases of iodosyncrasy to arsenic in the form of sodium cacodylate are recorded by Staenble (*Deut. med. Woch.*) who reviews the recent advances made in the study of the action of the various compounds of arsenic on the body. One patient, a man aged fifty-two, suffered from malaria, general debility, and neurasthenia for which sodium cacodylate was prescribed. The first injection of 0.05 gramme, taken from a Bloch's ampulla, caused no disturbance. The same amount was introduced into the right forearm four days later. After twenty-four hours a rectal temperature of 101.8° , great weakness, pain in all the limbs, and in the loins, and a sensation of pressure, in the head were observed. The site of the injection was hot and brawny, and erysipelas was suspected. Next day, however the temperature was almost normal, the general condition was better, and the local swelling was no larger. Scrupulous cleanliness was exercised when, four days later, the same dose was given, but twenty-four hours later the same phenomena recurred, and the injections were therefore discontinued.

The drug had been administered to many other patients without ill effects by the author, when he again observed symptoms of iodosyncrasy. The patient, a woman aged thirty-six, who suffered from exophthalmic goitre, had been given twenty-four injections of 0.05 gramme of Clin's sodium cacodylate on twenty-four consecutive days without in effects. On August 14 the last injection was given. On August 24 she left the lowlands and came to St. Moritz, where, two days later, she was given an injection of 0.05 gramme of the drug. Next day her temperature was 102.2° , and she complained of "rheumatic" pains through her body, anorexia, and headache. Her respiration was labored and asthmatic. Although scrupulous cleanliness had been exercised, the site of the injection was hot and brawny. On the second day the patient was much better, and on the third day the temperature was normal and the swelling began slowly to disappear. As the needle had previously contained tuberculin, it was thought that a trace of this might have been injected with the sodium cacodylate, for the reaction was like that which follows an injection of tuberculin. This view was disproved by the repetition of the reaction on September 8, twenty-four hours after the patient had injected half the usual dose of sodium cacodylate into her left thigh. The local but not the general reaction occurred. On September 9 the author substituted Bloch's for Clin's

preparation, and injected 0.05 gramme into the right thigh after careful disinfection of the skin. Next day the temperature rose to 102° , with a rigor in the evening. The other symptoms resembled those of the previous attacks, but were less marked. The site of the injection was again inflamed. The patient had completely recovered when on September 16, she was given an injection of 0.025 gramme. Twenty-four hours later the site of the injection was firm and swollen, and the temperature was slightly raised. The same dose, injected on September 20, produced less fever, but a more violent local reaction than on the previous occasion.

The cutaneous reaction of the drug was now tested by von Pirque's method. After the skin had been cleansed and lightly scarified in three places, glycerin was applied in two places and sodium cacodylate to one. After eighteen hours the former two control places showed no reaction, while on the third place a reddened and infiltrated papule, 8 mm. in diameter, had appeared. This increased in size during the next thirty hours, and was still palpable two days later. The only explanation the author can give for the patient's erratic behavior is that the passage from a low to a high level effected a change in the metabolism which rendered the tissues intolerant to the drug.—*British Medical Journal*.

Haemorrhage into the Peritoneal Cavity Caused by Accidental Rupture of the Ovary.—Primrose (*Univ. Toronto Med. Bull.*) records two cases unconnected with pregnancy. In each case apparently a normal Graafian follicle had ruptured as the result of an accidental strain. In one the patient lifted a heavy weight, and the rupture occurred immediately; in the other, the patient had a violent attack of vomiting in the early stage of an acute appendicitis, and the rupture occurred then. In both there was a serious haemorrhage into the peritoneal cavity, nearly ending fatally in one case. Rupture is attributed to the fact that the ovaries were congested, because the women were within two days of a menstrual period. The Graafian follicles were under undue tension at that time, and the increased abdominal strain sufficed to cause rupture.

Puerperal Pelvic Thrombosis. Ligation of Left Common Iliac Vein.—Wallace (*Jour. Obst. and Gyn. Brit. Emp.*) reports the case of a woman aged 25, who developed rigors and pyrexia on the sixth day after her third confinement. Thrombosed veins were palpable along the line of the left uterine and left obturator veins.

She was extremely ill, with a temperature reaching 106° F., pulse 160. Exploratory abdominal section was done on the 23rd day. A tortuous vein in the left broad ligament was found to be thrombosed as far out as the infundibulo-pelvic fold. The left internal iliac vein was thrombosed up to its junction with the external iliac. The anterior division of the internal iliac was also thrombosed, and could be traced inward to the uterus. The left common iliac vein was ligatured. There was definite improvement for three days, the rigors entirely ceasing. After the fourth day the rigors recurred, and the patient ultimately died from exhaustion.

Eye Complications in Mumps.

Tronzo believes there are more ocular complications in parotitis than we generally believe. The conjunctivitis of mumps has the following characters: It is usually bilateral, it affects the whole of the mucosa, is never purulent, and is often accompanied by chemosis and palpebral cedema. Keratitis is much rarer; as a rule it is slight, but it may leave opacities. Two varieties of iritis may occur; an acute form leaving no residues, and a chronic form diminishing visual acuity and giving rise to synechiae. The most serious complication is optic neuritis, which often ends in atrophy. Dacryadenitis may accompany or follow the parotitis or may even be the only manifestation of mumps. It is characterized by considerable cedema of the lids, especially the upper, and is often associated with chemosis. It is recognized by the existence of a small and tender swelling in the position of the lachrymal gland. Its duration is on the average two or three weeks. Transitory palsies of accommodation and paralysis of the external or internal rectus, and hemeralopia, glaucoma with proliferation retinitis, and episcleritis have also been noticed by the writer, who thinks the physician should bear the possibility of such complications in mind.—Theses de Lyon.

Susceptibility of *Gonococcus* to Heat.

—Harrison and Houghton, in the *Journal of the Royal Army Medical Corps*, say that the *gonococcus* cannot resist a temperature of 104° F. for six hours. This fact, together with the observation that in high fever a gonorrhea sometimes disappears spontaneously, led these authors to investigate whether this fact could not be used in the treatment of gonorrhea. They found that the urethra will sustain a temperature of from 114° to 119° F. provided it is gradually applied. They therefore had constructed a closed metal catheter, No. 9 to 10 gauge, inclosing a smaller one, No. 2

gauge, about one inch shorter internally, but projecting externally one inch. The small inner catheter is open at both ends, while the larger outer one is closed at both ends, but has a discharge outlet near the outer end. The double catheter is passed, and the inner one is connected by rubber tubing with an irrigation vessel elevated about eighteen inches, from which a stream of water at 114° F. is allowed to flow, adding hot water gradually till the temperature is attained of 118, 121, 122, or even 125 degrees, according to the tolerance of the urethra. If the temperature is too high the meatus may be blistered. The irrigation occupies about one-half hour and a suppository of 1/75 grain of atropine is administered night and morning before treatment. The usual aseptic and lubricating precautions are of course adopted. The authors report sixteen cases thus treated, of which eleven were acute and purulent, five sub-acute or chronic and watery. The gonococci entirely disappeared in a period varying from the 4th to the 11th day after the first treatment. The character of the discharge at once changed to mucopurulent or mucoserous, and in six cases had disappeared entirely by the 8th day, and the administration of stout after the disappearance of the discharge failed to cause its return. There were no accidents of any kind. Epididymitis did not occur; indeed, in one recent case with subacute epididymitis that condition disappeared after the first application. This method of treatment, owing to its simplicity, appears to demand a thorough trial at the hands of those who have considerable experience in the treatment of gonorrhoea.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Traumatic Diseases of the Spinal Cord, Apropos of a Case of Progressive Spinal Amyotrophy from Over-Exertion.—Erb (Deutsch. Zeitschr. f. Nervenheilk.) describes a case where progressive spinal muscular atrophy appears definitely to have ensued on a sudden severe muscular effort.

The patient was a healthy man of 31, a laborer in a vineyard. On the 7th of April, 1910, after having been at work pruning vines for some two hours, he came to a branch of unusual thickness and, making a sudden, powerful muscular effort to cut through with a pair of shears, he immediately felt a violent pain in the ball of the right thumb, so severe that he had to stop using the right hand and finish his work that day with his left. The pain continued for some days, but there was no indication of local injury. After treatment with embrocation and otherwise, the symptoms disappeared in a week or two, but the right arm still felt a little weak, and he used his left more than before at his work.

In the course of about two months he noticed that the right hand was becoming definitely weak, and the muscles of the right hand were beginning to waste. The weakening and wasting gradually spread to the forearm, and, in a less degree, to the muscles of the upper arm and shoulder. There were no pains, no paræsthesiæ, no loss of sensibility. When the patient was seen by the writer, in December, 1911, the right arm presented the typical appearance of progressive muscular atrophy. There was marked atrophy of the small hand muscles, of the extensor groups on the forearm, and to a less extent of the flexors and supinator longus; the biceps and brachialis anticus were also atrophic and weak, and in a less degree the triceps; the deltoid also was weak and wasted. There was a good deal of muscular fibrillation, and the arm reflexes on the right side were present, and possibly a little brisker than on the left. The plantar response was flexor on both sides.

There is an excellent critical analysis of the case, and of analogous cases from the literature, and the view is adopted that a sudden, violent muscular strain, followed by ordinary use of the same muscles again, initiated a change which led to the development of a progressive spinal disease.

Tuberculosis of the Larynx in Children.

Edouard (Theses de Lyon) says that laryngeal tuberculosis is relatively rare in children. Its frequency in tuberculous children ranges from 2 or 4 per cent. according to the clinical symptoms only to 13 per cent. as ascertained by post-mortem examination. A primary form is most exceptional. The

condition is chiefly found in milary tuberculosis and in advanced pulmonary and generalized tuberculosis. Its pathogeny varies. In milary tuberculosis infection occurs by the blood stream, while in some of the cases where the pharynx is simultaneously involved the lymphatics convey the infection. Inoculation by the sputum may take place in children as in adults. The earliest symptoms is usually dysphonia, and is followed by laryngeal pain, dysphagia, and an intermittent, dry, hoarse cough. Dyspnoea, however, which may be of sudden onset, is the predominant symptom, and is more marked than in the adult, partly from the narrowness of the larynx and partly from the frequency of spasmodic phenomena in children. The clinical forms are the granular (the most frequent), the infiltrating and ulcerative, the ulcero-œdematous, the pharyngo-laryngeal, the vegetative, tuberculous tumor of the larynx, the subglottic and the perichondritic. Diagnosis must be made in a few rare cases of sudden onset from diphtheria and suffocative laryngitis, in the vegetative forms from papilloma, and in other cases from congenital syphilis of the larynx and compression by lymphatic glands. The prognosis is very grave. The course is always rapid and rarely exceeds eighteen months. Death frequently occurs in a few months or even weeks. In Nobecourt and Tixier's case the duration was only four days. The treatment is that of pulmonary tuberculosis. Owing to the difficulty of local applications and the frequency of asphyxial attacks tracheotomy is often indicated. The thesis contains the histories of eleven cases, four of which are original, in children, five males, six females, aged from 1½ months to 14 years.—British Journal of Children's Diseases.

The Role of the Suprarenals in the Pathology and Treatment of Diphtheria and Other Infectious Diseases.

Moltschanoff (Jahrb. f. Kinderheilk.) examined the suprarenals of forty-two children, twenty-nine of whom had died from diphtheria, six from scarlet fever, and the rest from other infectious diseases. He also examined the suprarenals of two children who had died from accidents, and the suprarenals of guinea-pigs killed by diphtheria toxin. In all the diphtheria cases there were extensive hyperæmia and occasionally small hæmorrhages, especially in the medulla. The degree of the vascular lesions depended, not on the duration, but on the severity of the disease. Mixed infections, such as measles and diphtheria, increased the vaso-motor lesions. The changes in the cells varied, and depended on the dura-

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tion of the disease. The author's conclusions are as follows: (1) The role of the suprarenals in diphtheria is very important and complicated. (2) The suprarenals take an active part in combating the diphtheria toxin, although at present the exact nature of this role is uncertain. (3) In the initial stage of diphtheria the suprarenals show increased functional activity, which in severe degrees of intoxication leads to exhaustion and atrophy of the cells. (4) This atrophy, associated with well-marked circulatory disturbances in the gland, is the cause of the diminution of the functional activity of the suprarenals in severe cases of diphtheria. (5) Acute functional insufficiency of the suprarenals causes a number of severe symptoms in diphtheria, and may lead to the death of the patient. (6) Adrenalin is a powerful agent for raising the depressed cardio vascular tone in infectious disease.—British Medical Journal of Children's Diseases.

Disadvantage of the Lateral Position in Delivery.—Westphalen (Zentralbl. f. Gyn.) calls attention to the possibility of an endogenous infection resulting in cases of rapid delivery conducted in the lateral position where the patient is not turned over on her back immediately after the birth of the head. He has observed that in such cases a change in the position or pressure on the uterus results in the extrusion of air bubbles from the genital canal. The Dr. believes that this results from negative pressure in the tract with the consequent entrance of air. He is convinced that the latter may include infectious material from the vulva and that this is apt to be drawn up into the higher parts of the canal. For the above reasons he believes that in every instance where a woman is delivered on her side a return to the dorsal position should be made as soon as the head is born.

Lumbar Injection of Magnesium Sulphate in Eclampsia.—Rissmann (Zentral. f. Gyn.) believes that therapeutic measures in eclampsia should be directed principally to the brain and spinal canal as being the center of the disease. In view of the good results obtained by such treatment in other convulsive seizures, he believes that in severe cases the injection of magnesium sulphate into the spinal canal is indicated. In his case 5 c.c. of a sterile 15 per cent. solution were injected by lumbar puncture and no further convulsions occurred. On the third day the patient seemed entirely well. The birth of a small child during this period had had no effect upon the convulsions.

Correspondence.

The eighty-first annual meeting of the British Medical Association was held at Brighton July 22 to 25, 1913. There were about thirteen hundred members present and the most of them brought their wives and daughters. The council or legislative body met three days before the main body convened and had time to settle about all the business and medical politics. The mornings were given up wholly to scientific work and after one the British doctor gave himself entirely to pleasure. And why shouldn't he do so. Doctors are entitled to recreation, and how better than with their fellows of the profession at their annual meeting. They certainly did the social act as of long experience. The Mayors and Mayoresses of Brighton, Hove and East-bourn, and the municipalities of the same, all adjoining towns, vied with each other as to who could do us the more honor. Private individuals as well did the same, while the members of the local profession of Brighton and vicinity did their very best. Numerous excursions to places of interest in the vicinity were given. The Saturday following the meeting was entirely given up to excursions. Throughout the week there were numerous games of cricket, golf and croquet. The visiting ladies were given an extensive motor car ride every morning which they very much enjoyed, as the country about Brighton is beautiful. Brighton is England's most popular sea side resort, and being so near to London, but little more than an hour's ride by train, is almost a suburb. Brighton is in fact often spoken of as London-by-the-sea. E. S. M.

Atropine in Ulcer of the Stomach.

Mathieu and Girault report good results from the use of the following formula of Pouchet in the treatment of the pain resulting from gastric ulcer:

R Neutral sulphate of atropine, 0.01 gram.
Glycerin (28° Baume), 3 c.c.
Distilled water, 1.5 c.c.
Alcohol (95 per cent.), ad 10 c.c.

Fifteen drops of this solution contain one milligram of atropine. The dose is ten drops gradually increased to twenty drops three times a day. The treatment is kept up for about one week.—Bulletin General de Therapeutique.

Adrenaline in Chloroform Anaesthesia.

—Depree (British Medical Journal). A well developed and healthy man, aged 26, was anaesthetized with chloroform for a submucous resection of the septum nasi. When lightly under the anaesthetic about 5 minims of a 1 in 1000 solution of adrenaline

Fellows_Syrupus Hypophosphitum

**Quadraginta per annos et a medicis et ab
aegris orbis terrarum totius probatus**

Compositio sui generis neque imitabilis

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Preparations "Just as Good"

was injected into the nose subcutaneously. About a minute afterwards the patient suddenly collapsed and died. At the post mortem examination nothing abnormal was found in any of the organs.

Treatment of Puerpeal Endometritis.—

Delmas, (*Presse medicale*) is credited with strongly advising the use of tampons soaked in oil of turpentine in puerperal endometritis. After exposure of the cervix by means of a speculum, a strip of gauze varying in length according to whether the uterus is abortive or puerperal, is dipped in the turpentine and inserted systematically with long forceps into the uterine cavity. One end of the strip is left in the vagina, from the walls of which, previously irrigated with boiled water, it is kept separated by a tampon of cotton. All burning of the vulva is avoided if the parts are first copiously covered with petrolatum. The intrauterine strip is removed only after twenty-four hours.

In a first series of cases, the author used the turpentine where, with retained membranes, digital or instrumental evacuation of the uterus, followed by iodine, failed to overcome fever. The successful results noted then led him to employ it regularly after evacuation or curettage. It was found that after turpentine the pulse and temperature fell progressively during two or three days until fever was entirely gone.

The turpentine probably acts in several ways. Thus in the first place it is almost a specific antiseptic to the streptococcus, and also hinders the development of other organisms. Again, it causes a pronounced local afflux of leucocytes. Finally it is effectually absorbed by the uterine mucosa, with its widely dilated vessels, and enters the general system, as shown by the odor of violets given off by the urine, which lasts for several days. Thus, as in the case of subcutaneous injections of turpentine solutions, the opsonic index of the blood is notably increased. The simplicity and efficacy of the turpentine treatment warrants, according to Delmas, its general adoption.

Ovarian Secretion.—McIlroy (*Jour. Obst. and Gyn. Brit. Emp.*), says that the ovary has a dual function—the production of ova, and the elaboration of an internal secretions. It is of the nature of a ductless gland, carrying out its function independently of its vascular or nervous supply. The ovary controls the nutrition of the genital organs and mammæ. Removal of both ovaries before sexual maturity causes an arrest in the development of the genital organs and mammæ, and prevents the onset

of menstruation or proœstrum. The infantile type is maintained and the secondary sexual characters are not well marked. Retardation of the ossification of the long bones has been observed. There is no effect upon the growth and general nutrition. Removal of both ovaries after sexual maturity causes atrophy of the genital organs and mammæ, cessation of menstruation or proœstrum, and increased deposit of fat. Removal is frequently followed by certain nervous phenomena characteristic of the menopause. Removal of both ovaries during early pregnancy causes abortion to take place. Removal of one ovary causes compensatory hypertrophy in the remaining organ independent of pregnancy or œstrus. Abortion does not take place as a consequence of removal of one ovary. The corpus luteum is concerned with the embedding and nutrition of the ovum and with metabolism. It controls the blood supply of the uterus. The interstitial cells are increased in size during pregnancy and œstrus and are concerned with the nutrition of the genital organs and the internal secretion of the ovary. Transplantation of ovarian tissue after castration prevents the occurrence of atrophy in the genital organs and the cessation of menstruation. Menstruation depends entirely upon the presence of ovarian tissue. It is a preparation on the part of the uterine and tubal mucosa for the reception of a fertilized ovum and corresponds to the period of processes by means of which some unknown chemical substances are eliminated from the organism. Menstruation begins at puberty, and ceases at the menopause when the ovaries become atrophied. It ceases after removal of both ovaries, but can be made to recur by transplanting ovarian tissue into another situation. The correlation between menstruation and ovulation is unknown. The nutrition of the uterus is dependent upon the presence of ovarian tissue. Removal of uterine secretion has no effect upon the ovaries. Ovarian extracts have been found of use in the treatment of chlorosis, amenorrhea, obesity and menopausal symptoms. Much depends upon the condition of the ovaries from which the extracts are prepared and the mode of preparation. Most clinicians agree that the extract of the corpus luteum has the most therapeutic value. Information as to the influence of ovarian secretion upon metabolism is as yet unreliable. Ovarian secretion is said to prevent the onset of obesity, and to increase the respiratory interchanges. Most observers agree as to no change occurring after castration in the nitrogen metabolism. Several authors maintain that the ovaries have a marked influence upon the excre-

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is unquestionably the most reliable therapeutic agent the physician may employ. With it a maximum of sedative effect is secured.

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is highly useful as an application in gynecological practice, especially in inflammations of the vaginal mucosa.

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is indicated in many forms of circulatory disturbance attended by malnutrition for it possesses altero-reconstructive properties.

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tion of calcium. Retardation of the coagulation period of blood has been found in diminished ovarian function.

Malignant Chorioepithelioma.—Proust and Bender (Rev. de gyn. et de chir. abd.) state that we may consider that chorioepithelioma is a tumor of the embryonic type, but an embryoma developed at the expense of the embryonic adnexa; it is a malignant neoplasm in which the fetal elements invade the organism of the mother and act like a destructive parasite. It has been long believed that such a tumor can develop only with the coexistence of a pregnancy. It is now known that it may develop in the uterus, or tube, and even outside of the generative organs at the expense of placental debris which have acted as emboli. In both these cases there must be an intra- or extrauterine pregnancy. But aside from pregnancy, and in uterus, ovary, or tube tumors have developed reproducing exactly the form of the chorioepithelioma, tumors that are malignant and invading, and whose analogy to the uterine placental tumors are striking. These tumors have no relation with gestation at all; they develop without fecundation, at the expense of embryonic germs included in the genital glands and represent a form of degeneration of teratomata whose genesis is explicable only by the theory of merotomy. Studying first the chorioepitheliomata in relation with gestation we find that the chorionic villi have the power of penetrating the vessels of the placenta and uterine sinuses. The placental elements are carried to a distance, and fragments of syncytium are carried along in the current of the circulation as emboli. These have been found in the lungs of women who have died of eclampsia. As to pathology this tumor is ectodermic, epithelial, of fetal origin, in the genesis of which two elements participate, the syncytium and the cells of Langhans. The size of the uterus is increased to that of the

uterus at the third or fourth month; it is soft and elastic, and irregular in shape. The appearance of the tumor is very variable. It is often necrosed or ulcerated, always badly limited, with prolongations into the uterine muscle. The tumor may develop directly under the uterine mucosa or in the uterine muscle. We might say that it has four forms: circumscribed, vegetating, ulcerated and interstitial. Secondary tumors form in the uterus, and neighboring organs, the bladder and intestine. The tumor is characterized by two sorts of elements, plasmodial masses and clear polyhedral cells. Between the cells of Langhans and the multinucleated masses all intermediate forms are found. The tumor may appear after a pregnancy, without alteration of the placenta, or it may be ingrafted on a placental polypus, or follow a hydatidiform mole. Metastases have been found in almost all of the organs, the most frequent being pulmonary. Next most frequent are those in the vagina and vulva, tubes and ovaries, liver, kidneys and brain. The tube is very rarely affected. Here the tumor is very friable and hemorrhage and metastases are frequent. It has never been diagnosed and is only found at autopsy or operation. Aside from pregnancy the tumor is developed most frequently in the vagina; it is identical with metastatic nodules in the same location. The most likely theory of origin is that of Pick, who believes these tumors are derived from normal chorionic villi, embolized or secondarily degenerated at their point of fixation. Chorioepitheliomata derived from teratomata are independent of pregnancy, and occur in young girls, in women of advanced age, and even in men. They are found especially in the genital glands, the ovaries and testicles. They present the characteristics of the ordinary chorioepithelioma developed at the expense of rudimentary ectodermal cells. The author believes that it is not sufficient

to find in a tumor polynuclear giant cells, and isolated plasmodial masses to call it chorioepithelioma, still it is impossible to deny their likeness to the true tumors of that type.

Treatment of Eclampsia by Morphine and its Adjuvants.—Rouvier (Arch. mens. d'obst. et de gyn.) says that since we have not yet succeeded in getting an efficient remedy for the disease we must at least lessen the crises as soon as possible, and assist in the prompt elimination of the causative toxins. The author has treated twenty cases, of which two were without crises. An impartial analysis of these cases shows that the result of this treatment is more rapid and efficacious the earlier in the case the morphine is administered. In gravid, parturient, or puerperal patients who have had eclamptic crises or are liable to these attacks, we should give three injections of morphine, separated by an hour's interval, followed by three others separated by two-hour intervals. In addition there should be instituted a water diet, followed later by a half-milk diet, and later still by full milk. Lavage of stomach and intestine are also to be employed. This treatment is of value in all cases which are threatened with eclampsia. If possible it should be given before the first attack as a preventive measure. As soon as an attack has occurred morphine should be begun. Small or medium doses should not be given, since time is wasted and good results are not rapidly obtained. Kidney disease is not a contraindication for morphine, as it assists the kidneys. Unconsciousness is also not a contraindication, as some authors believe.

Esthiomene, or Lupus Vulvae.—Kurz (Jour. Obst. and Gyn. Brit. Emp.) says that the term esthiomene has been misunderstood and misapplied by many authors. She holds that it should be retained as a useful term replacing the expression "hypertrophy with ulceration." It should be clearly understood that it is a tertiary syphilitic lesion. "Lupus vulvae" should be replaced by the expression "tuberculosis of the vulva." Lupus vulgaris as it occurs in the skin, often of the face, has not been known to occur in the perineum. Tuberculous ulceration and tuberculous hypertrophy, however, do occur in that region. The term elephantiasis has been applied to hypertrophy occurring in chronically edematous parts whence the return of lymph has become obstructed or rendered sluggish, and where owing to the unhealthy state of the enlarged parts a low form of chronic inflammation has set up. The hypertrophied masses of esthiomene are not edematous

tissue enlargements; they are granulomatous growths with a tendency to necrosis. Esthiomene is not a disease sui generis. It is not a form of low chronic ulceration occurring on a soil weakened by constitutional syphilis or tuberculosis. Esthiomene is not a merely local inflammatory state following on irritation. There is no relationship between tuberculosis and esthiomene.

The only connection existent between esthiomene and malignant disease is that the former may occasionally undergo malignant degeneration. Esthiomene is not due to lymph stasis, hence it does not belong to the group of hypertrophies called "elephantiasic." The reasons for regarding esthiomene as a tertiary syphilitic manifestation are: (a) A direct or probable history of syphilis is almost always obtained. (b) The majority of early cases of esthiomene respond to antisiphilitic treatment. The late and chronic cases which do not respond do not indicate that esthiomene may at times be due to other causes than syphilis; there are many tertiary lesions, such as strictures and leukoplakia and others which do not yield to the usual antisiphilitic remedies and which are none the less due to syphilis. (c) The chronic course of esthiomene marked by attempts at healing with subsequent relapses, the absence of local disturbances, the non-impairment of the general state of health indicate the syphilitic nature of the condition. (d) The masses of cicatricial tissue with subsequent contraction producing severe strictures and extensive deformities is typical of no other disease. Where the necrosing process is in excess over the tendency to fibrosis we have the enormous tissue destruction characteristic of syphilis. (e) In no other constitutional disease is there such a constantly present combination of hypertrophy and ulceration as in syphilis. In elephantiasic hypertrophies there may be a small amount of ulceration. Often none is present. In tuberculosis of the vulva the ulceration is usually extensive and the hypertrophy of parts is slightly marked or absent. (f) The microscope reveals the typical gumma or granuloma of the third stage. (g) Up to the present time we find no cases recorded where the spirocheta pallida was found in esthiomene tissues. It is a well known fact that the organism does exist, though in comparatively small numbers, in the lesions of the tertiary stage, but they are usually difficult to find. With easier methods of demonstrating the organism the time will no doubt come when the spirocheta of Schaudinn will be seen in esthiomene tissues with the same ease as the bacillus of Koch in tuberculosis lesions. (h) With

equal certainty of proof will the positive Wassermann reaction relegate all cases of esthiomene into the field of tertiary syphilitic lesions.

Special Fracture Number.

The American Journal of Surgery will present in January an issue of their journal devoted exclusively to fractures and their treatment.

The following subjects will be presented by acknowledged authorities in this special branch of surgical work:

"Astragalus Injuries," by F. J. Cotton, M.D., Boston, Mass.

"Diagnosis of Fracture," by Lewis A. Stimson, M.D., New York

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"A Splint for Maintaining Nail Extension During Transport," by John C. A. Gerster, M.D., New York.

"Fracture of the Skull: Roentgen Ray as an Aid in Its Diagnosis," by W. H. Lockett, M.D., New York.

"Vicious Union," by James K. Young, M.D., Philadelphia, Pa.

"The Immediate and Remote Results of Fractures of the Skull and Spine," by Chas. Elsberg, M.D., New York.

"Conservation in the Treatment of Fractures," by Wm. L. Estes, M.D., South Bethlehem, Pa.

"Some Phases of Fracture Treatment as Based on Hospital Experience," by E. S. Van Duyn, M.D., Syracuse, N. Y.

"The Treatment of Fractures," by E. P. Magruder, M.D., Washington, D. C.

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Neuralgia.—In sciatica and in brachial or trigeminal neuralgia or neuritis the authors have found the application of the X-rays to the corresponding nerve-roots to give good results. Not only was pain markedly influenced, but the return of reflexes such as the tricipital or Achilles gave

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evidence of an actual reparative effects. Whether the cause of the neuralgia be a true radiculitis or a lesion compressing the nerve-roots, X-ray treatment relieves the latter from the harmful pressure. If, however, the neuralgia in a given case is due to involvement of the nerve-trunk peripheral to the radicular region, the rays will not bring relief.

In the application of the rays by the authors the apparatus was so arranged as to cause oblique penetration of the rays to the spinal roots, between or through the vertebral laminae, the opposite side, beyond the spinous processes, being protected by sheet lead. In sciatica, the irradiation should be directed to the last two lumbar and first three sacral vertebrae; the sacroiliac joint may also be treated. If the cause of the sciatica is suspected to be a true radiculitis, the entire region should be treated, up to the spinous process of the eleventh dorsal vertebra. For brachial neuralgia, between the third cervical and the first dorsal spinous processes is the region over which the X-rays should be directed, while for trigeminal neuralgia the latter should attain the area above the zygoma, near the ascending process of the malar bone. Zimmern, Cottenot, and Dariaux Presse medicale.

Intravenous Injections of Ergotin in the Treatment of Hemoptysis.

Garmagnano first determines the patient's blood pressure. If this is less than 110 he gives an intravenous injection of 0.50 gram of ergotin dissolved in 1 c.c. of distilled water. If the blood pressure is higher than 110 there is injected in addition 0.001 gram of morphine hydrochloride. A few minutes after the administration the cough and hemoptysis cease.—*La Riforma Medica*.

Malignancy of Mouth and Larynx.—

Trotter, in the *London Lancet*, points out that an important question to be decided in every case is whether the disease is to be attacked in a two stage or a one stage operation or that on the primary growth should be done first. In the great majority of cases there can be no doubt that the two stage operation is necessary. The attempt to accomplish in one sitting the two very complete procedures can only lead to excessive danger to the patient or a risk of incomplete removal of the disease. The only exception to this rule is in the case of epilynggeal tumors. Here the primary growth can not be attacked until the glands have been removed, and on account of the situation of the growth the gland operation even can not be done with any safety without a preliminary tracheotomy. As to the sequence of the two stages the following general rules are those upon which the author decides. If the primary growth is in such a situation and of such size that rapid union can be obtained after removal of it, then the first stage should be on the primary growth and the second on the glands. This is chiefly in early tongue cases. In such cases the whole treatment can usually be completed in a fortnight. Where the primary growth is such that rapid union is not probable (e.g., where the jaw has to be divided), the gland operation should be done first. This has its special disadvantage in the danger of pneumonia of an extensive neck operation: when there is an ulcerating growth in the mouth, but the special advantage is that the gland operation is much easier when done first. Where the glands hinder access to the primary growth three courses are possible: (a) Gland operation first. Tracheotomy is usually necessary. (b) Primary growth and partial gland operations first (usually tonsillar cases). (c) Single stage operation (epilynggeal cases). Where the primary growth or gland mass is of uncertain operability the one which is the more doubtful should be attacked first. The essential steps of the operation on the primary growth are as follows: Every operation for removal of a tumor must begin with a definite stage devoted to obtaining access

to the mucous surface of the tumor. This is usually a perfectly formal anatomical procedure which applies to all cases when the same region is affected. As soon as the tumor is fully exposed a systematic attempt must be made to disinfect the region, and during the subsequent removal of the growth every effort must be made to preserve the wound from contamination. The surface of the ulcer should be cauterized, the surrounding mucous membrane cleansed with alcohol and the region of the tumor packed off so that mucus is prevented from flowing into the wound. The tumor is then excised with the size and form of surrounding margin dictated by the nature of the case. The wound from which the tumor has been taken must be closed by suture and such other plastic procedures as are necessary should be carried out.

Abdominal Operations on Children.—

Balas (*Beitrag. zur Klin. Chirurg.*) emphasizes the wonderful recuperative powers of children after abdominal operations as compared with adults, but warns against prolonged operations. Children withstand shock very poorly and therefore loss of blood, exposure of the intestines, and prolonged anesthesia must be avoided so far as possible. Diagnosis is of the utmost importance and is not easy, especially in young children. For example, the onset of pneumonia and acute appendicitis is very similar in many cases. In pneumonia, however, the abdominal facial expression is lacking, the tongue is clean, the respirations are more rapid, and the abdominal tenderness, while present, is superficial and disappears on deep, steady pressure. Rectal examination is also of great assistance, if, as so often happens, the appendix lies in the true pelvis. Intussusception may be diagnosed by the movable mass, the absence of rigidity, and the passage of bloody mucus. Balas differs from the majority of American surgeons in that he believes in flushing the peritoneal cavity with saline, to counteract shock and sepsis. Drainage, also, is most important and should be more abundant than in adults, because of their lessened resistance. In tuberculous peritonitis the most favorable cases are those with effusion, and the benefit of the operation is due, in large measure, to the active hyperemia which follows the exposure of the intestines to the air.

Pituitary Medication.—Lagane (*La Presse Medicale*) says that the good effects of pituitary extract are seen usually during the first few days of its use, are lost if it be prolonged, and often cease with its stoppage. Infundibulum stimulates the un-

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striped muscle of the dilator iridis, of the bladder, uterus, gallbladder, and intestine. Experimentally, pituitary extract causes hyperadrenalism; in very large doses, hypothyroidism and thyroid atrophy; it also excites the secretion of the pituitary itself; it banishes the tetany that follows parathyroidectomy. Castration in both sexes causes pituitary hypertrophy; so, also, does extirpation of the adrenals. Therapeutically, pituitary extract has usually done good in increasing the force of the heart muscle, raising arterial tension, provoking diuresis, and improving appetite. It has done good in the following conditions: the hyperthyroidism of pregnancy, menstruation, and the menopause, the tachycardia and tremor of Graves' disease, but not its exophthalmos; if given with extract of ovary or testis and thyroid, it has sometimes been useful in genital insufficiency and myxoedema and in hypo adrenalism (it is contra indicated in hyper-adrenalism and arterial tension); it relieves some symptoms of paralysis agitans, but not its rigidity; com-

bined with ovarian extract, it was useful in two cases of myasthenia gravis; it has occasionally diminished the aprosexia of adenoids, even without operation. Lagane gives a daily dose to adults of 10 to 30 or 50 centigrammes of the dry whole-gland extract of ox, calf, or pig, or 10 to 40 of the infundibular extract; to a child, one-third or fourth of the adult dose, according to its age. He gives cachets of 10 c.g., preferably during meals. For obstetric use, he injects 1 to 4 cubic centimetres into the glutei muscles. Thaon advises avoidance of pituitary extract if the kidneys be not normal, and Cushing reminds us that the extract contains a depressor substance as well as a pressor, but Lagane says that Renon and Delille, and others who have used it extensively, have never seen any bad results. Lagane finds it useful during convalescence from acute infective diseases. He makes no reference to the galactagogue effect of infundibulin, which was discovered by Ott and Scott in 1910, and confirmed by Schafer and Mackenzie in 1911.

The Syndrome Of Little.—Concetti (Arch. f. Kinderheil), says that we should speak not of Little's disease but of Little's syndrome, since the disease is so varied and from such various causes. Many lesions are described under this head. It was considered by Little as a congenital malady resulting from difficult labor. Autopsy has shown it to be due to hemorrhage in these cases, generally caused by the rupture of the longitudinal sinus, the blood from which descends along the fissure of Rolando and destroy a variable part of the convexity and the motor areas. If it descends only part way to the base of the skull the legs are especially affected; if lower, the arms are involved, and lower still the face and speech centers. Thus we may pass in a succession of case from a slight permanent hypertonia to a spastic paraplegia, involving the upper or lower extremity or the face, or disorders of speech. If the frontal and parietal lobes are destroyed and small cyst formation takes place in the sensitive and sensorial zones, in the fibers of projection and association we thus can explain the convulsive and choreiform phenomena noted and the psychic complications. Another factor found at autopsy is a failure of development of the pyramidal tracts in the medulla and in the spinal cord. The cells and fibers in the brain having been destroyed at birth, the fibers in the tracts, which are not yet myelinated remain undeveloped, myelination never takes place, and the neuron cannot acquire its function of transmitting cellular energy. Formation may be only retarded and the special reparative forces of nature may later cause development to proceed, and thus lead to gradual improvement. Clinical symptoms are spasm, contracture, exaggerated reflexes, predominance of the activity of the spinal cord, separated from that of the hemispheres, and with a tendency to improve from below upward. If the disease had begun in later life there would have been degeneration of the fibers, not failure to myelinate, and paralysis would predominate over contracture. But in Little's syndrome paralysis is not so marked, spasm is more so. New observations have shown similar cases to exist after premature birth, from retardation of development of the pyramidal tract, and congenital lack of cerebral influence on the medullary nervous system. This condition may also be produced in birth at term by the presence of hereditary dystrophies such as syphilis, tuberculosis, alcoholism, etc. Oppenheim has described a similar syndrome in which the congenital defect is in the peripheral medullomuscular neurons, resulting in atony instead of spasm. The conception has been extended

to all causes at birth or soon after labor which have prevented complete myelination of the fibers, such as meningoencephalitis, tumors, hydrocephalus, hemorrhage causing hemiplegia or monoplegia, syphilis in the new born, vascular lesions, cystic formations, thrombosis, trauma, etc. Here the symptomatic manifestations are not regular and typical, and vary with the kind and extent of the lesion. Fetal meningitis and meningoencephalitis may cause the most various symptoms, according as the cortex was more or less affected. In other cases, after a normal birth, some infectious disease soon attacks the child and during the convalescence the syndrome of Little develops. In these cases symptoms such as convulsions have shown meningeal irritation, or meningoencephalitis. If soon after birth we get agnesia, failure to myelinate there is contracture. If it occurred later in life there would be degeneration; flaccid paralysis at first, and later contracture. The essence of the lesion is agnesia, failure to myelinate, lack of cerebral action, and predominance of spinal action in the nervous system. The special lesion is always in the pyramidal tracts, and secondary to cellular alterations in the superior portion of the neuron. Integrity of the motor part of the spinal cord accounts for the lack of atrophy and absolute paralysis. Accessory phenomena, convulsions, and choreiform movements are accounted for by irritation of the brain from residual remains of inflammatory process, vascular changes, connective tissue proliferation, or cicatricial remains in the meninges, and these are lacking in true congenital cases. Typical cases result from difficult labor; premature labor predisposes to paraplegia; dystocia to general rigidity with accessory phenomena and convulsions. The author records eighty-two cases with five autopsies.

Mocarditic Syndromes in the Course of Acute Infections in Children.—Nobécourt (Jour. de med. de Paris) says that

the modern knowledge of the functions of the suprarenal bodies and hypophysis has changed our ideas with reference to the production of heart symptoms in acute infectious diseases of children, and their relation to the circulatory apparatus. In latent form cardiovascular troubles may give no symptoms at all, though physical signs show changes in the size and action of the heart and in blood pressure, and sometimes a slight increase in the size of the liver. Cardiac dilatation in rheumatism is not always associated with inflammation of the serous lining of the heart. The heart sounds are feeble, the second pulmonic sound is

accentuated, and there may be galop rhythm, and a systolic murmur at the apex. This dilatation may be only transitory or it may persist for some time. It may also appear in chorea, scarlatina, typhoid, and some of the lesser infections. There occur also variations in cardiac rhythm, tachycardia, bradycardia, arrhythmia, and arterial hypotension. There are also cardiac forms of these diseases, properly so called, in which the symptoms are most severe and the prognosis is generally fatal, the malignant forms of endocardial rheumatism. The symptoms are dyspnea, cyanosis, congestion of the pulmonary bases, and edema in various locations. The heart dilates, there is tachycardia, and frequently sudden death. In scarlatina endocardial troubles may begin early in the disease; in diphtheria they generally occur later; in typhoid they usually begin at the third week. At autopsy one finds in acute rheumatism an acute parenchymatous myocarditis, interstitial myocarditis being exceptional. In typhoid the myocarditis is parenchymatous or diffuse; in diphtheria it is of the parenchymatous type. In these infections there occur syndromes of suprarenal insufficiency characterized by asthenia, abdominal pains, small pulse, and low arterial tension. Another cause of cardiovascular changes may be meningoccephalitis; a third may be nephritis. In general these troubles are less severe in children than in adults since the heart has not been subjected to the influence of alcohol, intoxications, diathetic maladies, and multiple infections.

Paroxysmal Cough from Irritation of Chorda Tympani Nerve by a Spicule of Steel.

Donelan reports the case of a man, aged 45, who some days after visiting the engineering works of a railway company was attacked by a violent fit of coughing with a feeling of discomfort along the left side of the tongue. This symptom constantly recurred on apparently no provocation from any ascertainable cause for two years. His larynx, except for a general hyperemia, probably due to the cough, was normal. Nothing could be found in the cervical or thoracic regions that accounted for it. He had been repeatedly examined by various medical authorities. The author made a similar examination without result until he inspected the ears as part of a routine method. The right ear, meatus and tympanum were normal. So were the left, except for a tiny black spot with a reddish areola around it. This was situated just behind the malleus at exactly the spot where the chorda tympani nerve crosses it. Cocaine

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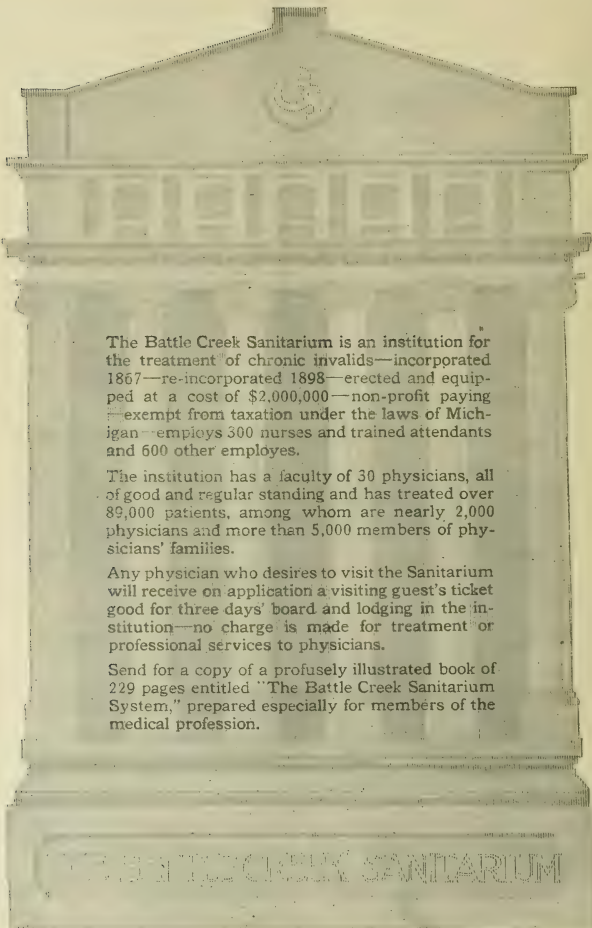
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was applied, and a small spicule of steel about 3 millimeters long was extracted. The patient had a most violent fit of coughing then, but according to the last report of the attending physician a few months ago he has had no further return of his trouble. —Proceedings of the Royal Society of Medicine.

An Alternative of Long Service.

It is mainly in chronic skin and glandular diseases that alternatives have found their most distinct field of usefulness, for these are conditions aggravated and continued by impaired nutrition and elimination, in the correction of which alternatives show what potent remedial forces they are. Among the alternatives Iodia (Battle) has long enjoyed professional favor and in this will be found a striking demonstration of its value, for no class of drugs are put to a more rigid test than alternatives, so its long continued use by physicians is the best evidence that it meets the demands made upon it. Iodia (Battle) will show its power in chronic skin diseases, glandular involvements and in other states indicating the corrective influence of an alternative agent. A distinct advantage offered by Iodia is that it may be continued over long periods without causing distress.



The Battle Creek Sanitarium is an institution for the treatment of chronic invalids—incorporated 1867—re-incorporated 1898—erected and equipped at a cost of \$2,000,000—non-profit paying exempt from taxation under the laws of Michigan—employs 300 nurses and trained attendants and 600 other employees.

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Send for a copy of a profusely illustrated book of 229 pages entitled "The Battle Creek Sanitarium System," prepared especially for members of the medical profession.

BATTLE CREEK SANITARIUM

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Tertiary Specific Ulceration of the Pharynx Undergoing Malignant Transformation.

McKenzie reports the case of a man, aged eighty one years, whose throat had been troubling him for three months. The syphilitic element was still active; it had destroyed the uvula and much of the soft palate, and had eroded the tissues in the tonsillar regions. In the region of the left tonsil a raised area, rather nodular in appearance and hard to the feel, made the author suspect the existence of malignancy. The nodule was therefore removed and examined for malignancy, with a positive result. There was a small, hard gland under the left angle of the jaw. The Wassermann reaction was negative. The patient was given iodide of potassium and had already benefited by it. The occurrence of epithelioma in the midst of what seemed to be an active tertiary ulceration was an interesting clinical experience.—Proceedings of the Royal Society of Medicine.

On Thursday morning, September 18, 1913, the American Association of Obstetricians and Gynecologists, in session assembled in Providence, R. I., adopted the following resolutions, which were presented by the Executive Council:

"Resolved, That the division of fees or the paying of commissions, secretly or openly, directly or indirectly, with any person or persons who may be instrumental in influencing patients to apply for operative care or professional advice, is unworthy of any member of the medical profession.

"Resolved, That if such division of fees or paying of commissions is engaged in by any member of the American Association of Obstetricians and Gynecologists, it shall be counted sufficient ground for expulsion from the Association.

"Resolved, That the Executive Council consider it its duty to investigate charges made against members, on the basis of division of fees or the giving of commissions, and on receipt of proof of offense the council shall either permit the resignation of the person or expel him from membership."

The Secretary was then instructed to have the resolutions printed and to send a copy thereof to every Fellow of the Association.

E. GUSTAV ZINKE,

Secretary.

Addison's Disease.—The author reports the case of a young man aged 21 years, previously always healthy, in whom a rapidly developing Addison's disease, with fatal termination in eighteen days, was

witnessed. The symptoms appeared in the following order: A progressive fall in blood-pressure was first noted. Then there appeared muscular weakness and evidences of some form of intoxication, including vomiting. Finally, there was observed a distinct pigmentation, localized more particularly over the genitals, axillæ and mammary areolæ. There were also diffuse and more or less extensive patches of melanoderma on the abdomen and the thorax. There were also diffuse and more or less extensive patches of melanoderma on the abdomen and the thorax. The mucous membranes of the cheeks, palate, and tongue were deeply pigmented. Subcutaneous injections of large doses of epinephrin were given, but no lasting effects were obtained. The autopsy revealed, in addition to a former, mild tuberculosis of the lung, complete caseation of the two adrenal glands, with marked hypertrophy of an accessory adrenal, but no change in the solar plexus. A. Lippmann Medizinische Klinik.

The Histopathology of Acute Pollomyelitis.—Walter draws his conclusions from four cases studied during the Westphalisms epidemic of 1908. He notes that there are two stages of acute inflammation, the lymphocytic and the plasmocytic, depending upon the predominance of symphyocytes or plasma cells. A regular finding is the presence of inclusions in the ganglion cells which inclusions the author regards as specific.—Deutsche Zeitschrift für Nervenheilkunde.

The Origin of Urinary Albumin.—Krasnogorski concludes on the basis of experiments performed with the aid of precipitation and complement-deviation methods that the albumin excreted in the urine in the albuminuria of infancy does not contain any of specific groups characteristic of they dietetic albumin, but is derived entire from the tissue protein.—Zeitschrift für Kinderheilkunde.

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Nurses will be sent out from the hospital to do private work when directed by the Superintendent of Nurses. This service will not exceed thirty-six weeks during the three years' course.



A Patients' Room.

During the senior year, nurses will probably be given terms of service as head nurses on different halls. Their capability to do this will be determined by the Superintendent.

In sickness, all pupils will be cared for gratuitously. The time lost through his or any other cause must, however, be made up.



A Patient's Room.

At the completion of the required course, if the nurse shows adaptability, she can take a special course in the operating-room, by giving an additional six months in this department; or she can take a special course in the Hydrotherapy Department, by giving an additional three months in that department. Nurses who take either of these special courses will receive diplomas if their work and knowledge in these departments merit it.

Each nurse is expected to respond faithfully in emergencies, and to be

willing to perform any duty assigned to her.

Nurses laundry during the course must not exceed twenty-four pieces per week. This includes two uniforms, seven aprons, four kerchiefs, one white plain shirtwaist, and one white skirt.

Suggestions to Patients:

Patients are advised to have some understanding with their physician, surgeon, or anesthetist as to what his charges will be.



A Patient' Room.

the various cases. Plenty of interesting literature is available, if it is desired to pass away any waiting hours. Doctors having patients in the Sanatorium, or just visiting, will be expected to make themselves at home. Visiting doctors from out town, especially, will find the building most centrally located, and it is hoped that they will make it their headquarters as long as they are in our city. Any member of the profession will be welcome to visit the Sanatorium at any time.

Rates for Rooms:

There are several large rooms, with three or more beds, at \$2.00 per day, which will include board room, and general nursing, and such medicines as are kept in the Sanatorium. Prescriptions and special medicines will be extra. These rooms are very large and comfortable, being well lighted, with plenty of space on all sides. Those patients who enjoy company will find these beds all that could be desired.

Two-Fifty per Day:

At \$2.50 per day, there can be had private rooms, which are very comfort-



Doctors' Private Room.

able in every way. These are well located and very accessible, and make very pleasant places to stay.

Three Dollars per Day: There are a number of rooms at \$3.00 per day, which are well finished in every way, and when the patient wishes to be very private they are most desirable.

For general information, address

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For further information concerning the training school, address Superintendent of Nurses Charlotte Sanatorium Charlotte, N. C.

Doctors' Reading and Lounging Room:

A large room on the third floor is fitted up for the special use of visiting doctors. Here they will find a very comfortable place to rest and discuss

**Four, Five, and Six Dollars
Per Day:**

These rooms are the most select in the building, have private baths attached, and are elegantly finished. They will be found to be as comfortable as the most exacting patient could wish, being handsomely furnished, with tiled baths, having an outside exposure, with plenty of light and sunshine. They must be seen and used to be appreciated.

The prices for all the various rooms include board, general nursing, and ordinary medicines, Prescriptions, special medicines, special nursing, laboratory examinations, hydrotherapy, and doctors' bills will be extra.



A Reception-Room.

Special Nurses: Patients desiring a special nurse can get one at any time. Nothing is more helpful and comforting to a sick person than a special nurse, and if a patient



Ladies' Sun Parlor.

a nurse, and one will be sent promptly on first train.

Use of The Operating Room: Surgical cases, requiring operations, will pay \$5.00 for the use of either of the operating-rooms, and this includes dressings and solutions.

Courtesies to the Medical Profession: While the Charlotte Sanatorium is an institution Owned and managed by its stockholders, its policy is liberal and at all times courteous to physicians and surgeons in Charlotte and the surrounding country. Special attention will be given to patients treated by the physicians and surgeons who are not officially connected with the institution.

wants one it will be very easy to have one here. The minimum charge for a Sanatorium special nurse is \$2.00 per day. Graduate nurses not in the employ of the hospital can be secured at \$25.00 per week, or \$3.50 per day. Of course, it will be only exceptional cases that will need two.

The Sanatorium will send out nurses on private duty at any time. Rates, \$2.25 per day and expenses for pupil nurses \$3.50 per day and expenses for graduate nurses. Phone or telegraph when you need

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acetic acids and tar products by being aged in especially prepared barrels

We request the careful attention of physicians to the medicinal properties of Duffy's Malt Whiskey. Used as directed it will be found invaluable when a tonic stimulant is required,

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THE DUFFY MALT WHISKEY CO.,

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will bring a special container with samples for office use.

Cutaneous Reaction to Tuberculin in Childhood.

Lapage, of Manchester Children's Hospital, believes thoroughly in the use of tuberculin in children and emphatically states that all tubercular cases give a reaction. He finds the cutaneous method more suitable for practical purposes, even though the subcutaneous methods give the highest percentage of results. He summarizes his experimental investigations as follows:

The results of the clinical examination and the tuberculin test are confirmatory of one another, the reaction occurring far more frequently in those showing symptoms pointing to tuberculous infection.

The x ray examination and the cutaneous tuberculin test correspond fairly closely if their results are properly interpreted.

A reaction indicates that the subject has been infected with tuberculosis and does not mean that the disease is progressive or even active.

We have at present no method of performing the test to afford us a means of distinguishing between active and passive disease.

A marked reaction or a reaction in a healthy person may be of good import and need not bear a sinister interpretation.

Slight reactions seem to occur more often in cases negative or only possible clinically.

A negative result may follow the test in children infected with tuberculosis: (1) if the disease is advanced; (2) if there is cachexia; (3) in very acute disease; (4) in mixed infections or cases complicated by acute disease.

A single negative test does not exclude tuberculous infection, repetition of the test increasing the percentage of positive results



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considerably (28 per cent.).

Even a negative result on repetition of the test does not always exclude infection, because some cases are only positive on the third application and others, positive to x-ray examination, but neither advanced nor cachectic in nature do not react to repeated tests. Therefore, judged by the x-ray examination, the cutaneous tuberculin test cannot be regarded as absolutely reliable in excluding tuberculous infection. There is greater difficulty in diagnosing occult tuberculosis after the age of two years. In indicating tuberculous illness the test is of greatest value in young children.—British Journal Children's Diseases.

Three Cases of "Calve's Pseudo-coxalgia."

Elmslie. Case 1: Boy, aged 10 years. In November, 1909, he fell and twisted his right foot: attended an out-patient department for a week and recovered. About three weeks later he was kicked on the right hip, which was noticed by the mother to be much bruised; from that time he limped and had occasional pain in the knee, especially after lying down. He had no pain at night. On examination in March, 1910, the hip movements except full hyperextension were free; the limb was $\frac{3}{8}$ in. shorter than the left, the shortening being above the great trochanter; there was little wasting of the thigh. A skiagram showed that the acetabulum was clear and smooth, but that the epiphysis of the head of the femur was a little flattened, its surface uneven, and its upper edge proportionately thicker than it should be; the neck of the femur appeared shorter and thicker than normal. He was kept in bed for three weeks and the condition did not alter. Subsequent skiagrams showed no important change, although the flattening of the epiphysis and the thickening of its upper border became rather more evident.

Case 2: Boy, aged 8 years. The parents in this case had not noticed anything wrong, but were informed after a school medical inspection that the boy limped. He was brought to the hospital in January, 1912. At that time there was little limitation of the abduction of the right hip-joint, most marked in the flexed position; other movements were free. The shortening was not more than $\frac{1}{4}$ in., and there was a little wasting in the thigh. A skiagram was taken, and the appearances were found practically identical with those in the last case. The parents were then informed that no treatment would be necessary.

These two cases agree as to clinical signs and skiagraphic appearances with Calve's

description, but neither was observed in the acute stage described by him.

Case 3: Girl, aged 9 years. At the beginning of 1912 this child had an attack of chorea and rheumatism in the right leg, and in the summer she was in hospital for chorea. Whilst convalescent from diphtheria in August she was noticed for the first time to limp, but she had at this time no pain or disability. She was brought to hospital again in December. No injury to the hip could be remembered. The right hip is kept flexed, further flexion is free, extension is limited, abduction abolished, and rotation in both directions limited. The limb is $\frac{3}{8}$ in. shorter than the left, this shortening being above the great trochanter. A skiagram shows the head of the femur to be deformed in much the same way as in the previous cases, but in addition the upper part of the acetabulum is eroded, and the head of the femur displaced a little upward; the femoral neck is short and thick.

This case differs from the first two and from those described by Calve in the changes in the acetabulum and in the partial upward dislocation.—British Journal Children's Diseases.

Estimating a Drug's Merit.

In estimating the merit of Bromidia (Battle) the features that should receive full consideration are its definite therapeutic potency and its freedom from the production of disagreeable after-effects, which latter, unfortunately, so frequently tend to neutralize the therapeutic efficiency of extemporaneously prepared bromide mixtures.

As a result of these advantages of Bromidia, it has come into wide use as a simple hypnotic agent, especially in those states presenting a marked nervous element. Its marked sedative properties reduce nerve tension, and thus composing the sleepless patient, permit a more prompt and decided hypnotic action. Bromidia (Battle) will be found an ideal agent in insomnia, for the rest it produces is refreshing and is not followed by depression or other disagreeable after-effects. With a minimum dosage a full sedative influence is exerted. The drugs entering into the composition of Bromidia, which need not be given here, for it is generally known, are chosen with the utmost care as to therapeutic power and purity.

Bromidia (Battle) is a very practical, matter-of-fact formula, its superiority resting entirely upon purity of components and skill in manufacture. Its present day wide use has been gained through its meeting severe clinical demands.

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is one of the links in the pathologic chain that constitutes intestinal auto-toxemia. A sluggish viscid bile stream deprives the intestine of its natural antiseptic and laxative secretion, and permits the stagnation and putrefaction of the bowel contents, and the systemic absorption of the septic products thus generated. Chologestin (or Tablo-

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is especially valuable when there is torpidity of the bowels or intestinal sluggishness arising from organic derangement of the liver and kidneys. It is the best agent for the relief of that form of constipation that is ushered in by an attack of colic and indigestion, and not only clears away the effete and irritating matter in the alimentary tract but eliminates the semi-inspissated bile that too frequently induces the so-called "bilious" condition; at the same time an abundant secretion of normal bile is assured, thereby demonstrating its value as a liver stimulant and true chologogue.

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gestin) stimulates the inactive liver cells, liquefies and increases the biliary secretion, controls excessive fermentation, and assists in the physiologic conversion of the ingested food stuffs. It thus tends to correct hepatic insufficiency, control flatulent distension, and relieve intestinal dyspepsia generally. Samples, formula and literature from F. H. Strong Company, 58 Warren Street, New York City.

Cod Liver Oil in Strumous Skin Diseases.

In a certain wide variety of skin lesions, usually of obstinate character, the exciting as well as the continuing cause is a nutritional defect. In these strumous skin diseases the remedy indicated to supply the tissues with needed nourishment is, without a doubt, cod liver oil. To give cod liver oil as such is, of course, out of the question; but the physician has at his command various palatable preparations, notably Cord. Ext. Ol. Morrhuæ Comp. (Hagee).

Inasmuch as these strumous skin disorders occur with much frequency in children, and children are markedly intolerant of the usual cod liver oil emulsions, it becomes plain that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) has a special field of usefulness in connection with such skin lesions. This product is palatable and easily digested and serves admirably for administration over long periods.

Anoci-Association and H-M-C.

No discussion of the problem of anesthesia has aroused as much interest within recent years as Crile's epoch-making contribution upon the subject of "anoci-association."

Crile declares that surgical shock, so often accompanying or following surgical operations, is the direct result of trauma, pain and fear. These depressing influences or harmful associations, he shows us, cause actual degeneration of the brain cells. But "shock may be prevented if these harmful associations can be removed." To remove the fear of operation is therefore one of the primary essentials to successful anesthesia; and to accomplish this, Crile uses scopolamine-morphine.

For years, H-M-C (Abbott)—Hyoscine, Morphine and Cactoid Compound (a better product)—has been advocated and successfully used by thousands of wide-awake surgeons for this exact purpose. The surgeon should employ it in every surgical operation prior to the administration of the volatile anesthetic. If H-M-C is injected one or two hours before the operation, the patient passes into a pleasant, dreamless,

dread-free sleep. A minimum quantity of chloroform or ether (drop by drop always, and only just enough—never continuously—and forgetting the usual guide of corneal reflex and going by breathing and absence of pain) is of course required to render him surgically unconscious and is relieved of the terrible nausea and distress following the operation itself, being thereby placed in the most favorable condition for prompt recovery, while the danger of shock is greatly reduced.

Wherever anoci-association is indicated—as it is in all surgical work—use H-M-C (Abbott). It will please you and it will please your patient.

Pain:—Crile shows that ether or chloroform does not destroy pain—it simply covers it up, the tremendously harmful, painful impressions still are conveyed by the nerves to the brain cells. These cells can be protected by "blocking" the nerves with a local anesthetic in the operative area, and for this purpose Anesthaine (Abbott) (for nose and other blood-filled areas Anesthaine and Suprarenal Comp.) supplies a convenient and an efficient remedy.

The surgeon who through technical skill avoids trauma (he should have a hand as delicate as a woman) and who habitually employs H-M-C and Anesthaine, will appreciate fully the value of Crile's wonderful discovery. Will you not investigate these remedies for yourself? Literature and samples of H-M-C will be sent on request by The Abbott Alkaloidal Company, (The Abbott Laboratories) Ravenswood, Chicago.

"Pregnant women who have the clinical history or reveal symptoms of syphilis may be submitted to the salvarsan treatment intravenously, and such treatment repeated at varying intervals, care being exercised to avoid too severe a reaction. The intervals between treatments may be longer than in the ordinary run of cases, and the course made to cover a period of 4 to 6 months."—C. H. Chetwood, of the New York Polyclinic Medical School.

Chetwood of the New York Polyclinic is of the opinion that "in the primary stage of syphilis the chancre is made to disappear with a single dose of salvarsan and when followed by three or four additional doses with or without a supplemental mercurial course, a permanent absence of symptoms will often result."

Medicine and law are alike in this respect, that neither can be thoroughly established. Good laws cannot be enacted on the spur of the moment; they represent the gradual growth of a social habit or custom, so that



Fighting Pneumonia to a Successful “Finish”

demands the utmost strategy of the doctor; the unremitting care of the nurse; and a prompt, liberal, systematic use of



Without forgetting, for a moment, the bacterial, or “first” cause of Pneumonia---the *present condition* which we must combat, is deep-seated congestion, impeded circulation of the blood, and rapid development of inflammatory exudate and tissue debris---adding bacterial poison to mechanical obstruction.

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by the time the law is ready to be enacted by a legislative body it has already become a practical law among the community.

The same thing is true of a remedy. Medicine comes and medicine goes, but only those based upon logic and having proved their therapeutic efficiency by the incontrovertible evidence of clinicians continue to live and grow in popularity. Such a product is Hayden's Viburnum Compound. Its reputation rests upon a half century of actual testing at the bedside and in the physician's office, and its reliability is as dependable as that of a law which has been operating in a community for a long time.

The Advantages of an Elm Poultice.

The value of topical applications of glycerine has long been recognized in certain skin diseases. Chemically pure undiluted glycerine, however, is somewhat irritant but its action is soothing and curative as used with elm wool in Glyco Ulmus, Lilly. These two ingredients combined with phenol and methyl salicylate, which favorably modify pathogenic processes in the skin, stimulate the local blood supply and therefore improve nutrition, and meanwhile the elm wool serves its purpose as an absorbent in the reduction of serous accumulations and local inflammations. Such a combination as the above is prepared at the Lilly Laboratories and sold through drug channels under the descriptive label, Glyco-Ulmus, Lilly. It has the advantage of being much lighter than kaolin dressings and contains more glycerine. For this reason it is particularly adapted in pneumonia cases. If used early on boils, suppuration, it is said, will not occur. It is cleaner and much easier to remove than the kaolin dressings. Glyco-Ulmus, Lilly, is supplied in six ounce and one pound glass jars.

The Norwich Vacamp.



The method this house has recently introduced for insuring permanency of activity of such drugs as ergot, digitalis and strophanthus, is the result of many months of research and experimental work and throws an interesting side light on the laboratory activities of this concern. They evidently expend a goodly part of their energies in the laboratory as well as on their manufacturing problems.

It has been generally recognized that such drugs as those mentioned above were

frequently uncertain in their activity—occasionally to an alarming degree—principally due to lack of standardization and deterioration. The former cause they long ago removed, when they instituted the physiological assays to which these drugs are subjected and then brought to a definite standard, but to overcome the deterioration which frequently occurred, even in tightly corked bottles, was a vexing problem.

It finally being determined that exposure to the air was the most generally conceded cause of deterioration, and if placed in a vacuum their activity was practically permanent, they therefore placed such products in amber glass ampoules, exhausted the air from the liquid and container by vacuum process, and sealed the container hermetically, giving them the name of Vacamps (vacuum ampoule). Vacamps should not be confused with medication in sealed ampoules, from which the air has not been exhausted.

Write the Norwich Pharmacal Company, Norwich, N. Y., for literature on this interesting subject.

Prophylaxis of Diseases Acquired from Eating Oysters.

Bodin, after examining the various methods which have been advocated for the purification of oysters, recommends the simple and efficient solution suggested by Fabre-Domergue, Inspector of the Fisheries. Oysters are kept for a week or ten days in tanks filled with filtered sea water constantly renewed, where they gradually lose all their septic bacteria. Filtered sea water may be replaced by artificial sea water, and thus Fabre-Domergue's plan may be carried out as well in towns far from the seashore.—Progres Medical.

Climatic Bubo.

The China Medical Journal contains a useful article by Dr. Gray, of the British Legation, Peking, on climatic bubo, a subject which was considerably discussed in India some 17 years ago at the time plague became recognized in this country.

Dr. Simpson claimed to have found an organism resembling *b. pestis* in some cases in the Shropshire Regiment which had recently arrived in Calcutta for Hongkong, and it is known that Dr. Cantlie endeavored to prove that "climatic bubo" was a form of *pestis minor* and more recently Luzzatti has gone one better and named it *parapestis*. Dr. Caddy described non-venereal non-plague buboes in Calcutta in these columns, and most medical men are agreed that there is such a disease as an entity by itself, and in this view Castellani and Chalmers agree.



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50 Per Cent. Pure Norway Cod Liver Oil.
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Tulane also offers highest class education leading to degrees in Medicine. Pharmacy. Dentistry, Hygiene and Tropical Medicine.

It is commonly met among sailors and stokers on steamships, and Dr. Gray has never heard of a case among women.

Various micro-organisms have been described, but the ætiology of the disease is still obscure, the most recent theory we have seen is that of Rost (Archiv für Schiff-und-Tropen Hygiene) who says:

"No visible cause can be assigned for the disease; cases occur for which no micro-organism whatever can be brought to view. As to causation it only occurs in the groin through which pass the lymphatics from the genital organs. It does not appear in children or in married people, or in those people aboard ship who are abstinent, and he concludes it is due to a micro-organism found on the vaginal mucosa of negro women."—Indian Medical Gazette.

The Mellier Drug Company desire to announce that the Tongaline Preparations and Ponca Compound Tablets, in addition to the \$1.00 sizes, so long and favorably known, are now offered in 50c. sizes, Tongaline Liquid in 4 oz. bottles, Tongaline Tablets, Tongaline & Lithia Tablets, Tongaline & Quinine Tablets and Ponca Compound Tablets, 50 tablets in a box.

These new sizes should prove a source of much convenience and satisfaction to physicians, because they can feel assured that their patients will then obtain the genuine article, when prescribed in these original packages.

Free samples on application to Mellier Drug Company, 2112 Locust St., St. Louis.

Clinical Results with the Phylacogens.

Under the above caption, Dr. R. W. Locher, Grafton, W. Va., in the Memphis Medical Monthly, has this to say: "In judging the therapeutic value of a new preparation, it is advisable that a great number of case reports be considered; and in order that the medical profession may have a great number of cases from which to judge, it is the duty of every physician to report such results as he may have. The Phylacogens are of comparatively recent origin, and yet even at this early date they have displayed their ability to produce satisfactory and in some cases remarkable results in the treatment of a great variety of pathological conditions. * * *

"We are informed that the Phylacogens are not claimed to be a 'cure-all' in any sense of the word, but simply valuable therapeutic agents in the treatment of numerous infectious conditions. From the very fact that all but Mixed Infection Phylacogen are to be directed against specific infections, it is necessary, before employing them, to make an accurate etiologic diagnosis.

For obvious reasons one cannot expect to produce results if Rheumatism Phylacogen is administered in a case that is really one of gonorrheal arthritis. Neither will an osteomyelitis or a syphilitic periostitis yield to Rheumatism Phylacogen, but the former may be logically treated with Mixed Infection Phylacogen. It would seem that this latter Phylacogen will ultimately prove of great value to the surgeon in combating post-operative infections, as well as infections following injuries of all kinds."

The writer then details fourteen case reports, covering a variety of diseases, and adds this by way of comment:

"From the foregoing cases it would be possible to draw numerous conclusions. What is especially striking, however, is that the Phylacogen treatment is apparently successful in the vast majority of cases and seems to give prompter and more definite results than is possible to secure with the usual recognized treatments. As a physician's experience increases he finds a greater number of cases in which each of the Phylacogens may be used, with the expectation of great benefit resulting therefrom. In any event, it must be conceded that Phylacogen in its various forms presents great possibilities and must be classed as a therapeutic agent which is more than worthy of trial."

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Correlation Between Complexion and Resistance to Auto-Intoxication.

I should like to call attention to the extraordinary variation in the resisting power of the individual as manifested by the color of the hair, not only to the changes in the

ST. LUKE'S HOSPITAL

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Personally conducted by Dr. Stuart McGuire
for the Accommodation of his Surgical Patients.

fat and color of the skin already referred to, but to all other consequences of auto-intoxication. The darker the hair the lower is the resisting power to auto intoxication, and the more conspicuous are the changes which result from it. On the other hand, if the hair is red or of a peculiar towy color the individual has a minimum of resisting power to the action of these poisons, and that resisting power varies directly with the distribution and with the intensity of the redness of the hair. This is manifested very conspicuously in the influence exerted by the toxins on the appetites of the individual. The darker-haired subject will loathe the sight of food and frequently abhor any sexual relationship, while the red-haired subject rarely manifests these effects, even in the extreme conditions of intestinal stasis. This influence of toxins on the normal appetite is of far reaching importance in our present state of civilization and is the source of much misery, discontent and trouble, to which I will not do more than allude here.—Andrewes, Proc. of the Royal Soc. of Medicine.

The Clinical Diagnosis of Latent Hereditary Syphilis

Goldreich calls attention to the importance of this subject, inasmuch as in one-third of all cases of latent inherited syphilis the Wassermann reaction is negative. The

most distinctive sign is enlargement of the cubital lymph nodes. These were palpable in 104 out of 130 of the author's cases of latent syphilis. In non-luetic infants these were palpable in from 15 to 17 per cent, of the cases.—Zeitschrift für Kinderheilkunde.

Salvarsan Per Rectum.

The author notes the rectal administration of salvarsan. Oil emulsions were employed at first, but it was found that suppositories of cocoa butter containing salvarsan were more satisfactory. The suppository is introduced about 5 or 6 p. m. and is completely absorbed by morning. There may be a slight local irritation which disappears after two or three hours, and may be prevented by the addition of a small amount of cocaine to the suppository. The constitutional reaction appears after two or three days, and is marked by nausea, lassitude and elevation of the temperature.

That the absorption of the dioxydiamidoarsenobenzol is complete, is shown by the fact that it is not recovered in the fæces. Adults receive in all 0.6 gm., divided in six doses given once a week for six weeks. A formula for salvarsan suppositories employed on the Continent is:

Salvarsan.....	0.10 gm.
Cocaine or novocaine.....	0.10 gm.
Oil of sweet almonds.....	sufficient to suspend.
Cocoa butter.....	q. s. (1.0 gm.)

The difficulty with regard to the use of these suppositories is that the salvarsan undergoes chemical change in a few hours. Coating the suppositories with *cera alb.* has been tried, but even then it would not be advisable to use these after two days.—Bagrow in *La Semaine Medicale*.

Tubercle Bacilli in the Blood in Surgical Tuberculosis.

M. Krabbel, employing Schnitter's method, was able to detect tubercle bacilli in the circulating blood in 12 out of 18 cases (66.6 per cent.) of bone tuberculosis; in 1 out of 5 cases (20 per cent.) of gland tuberculosis; and in 1 out of 4 cases (25 per cent.) of skin, mucous membrane, and tendon tuberculosis. The smaller proportion of positive findings in gland tuberculosis in contradistinction to bone tuberculosis is explained by the fact that in the former condition the process is largely a local affection from the mouth and tonsils, while in bone tuberculosis the tuberculous material gets into the blood stream. The demonstration of tubercle bacilli in the blood in cases of surgical tuberculosis may be of eminent diagnostic value in cases that do not give any evidence of pulmonary lesions.—*Deutsche Zeitschrift für Chirurgie*.

Important Points on the Dosage of Soluble Iodin (Burnham).

Dosage to effect is a most important consideration in attaining the greatest benefit from the use of Burnham's Soluble Iodin.

The following general directions are based on close observation and the study of a wealth of clinical data covering a wide range of cases and extending over a period of more than ten years.

Diseases of the respiratory tract, such as incipient phthisis, bronchitis, tonsillitis and delayed resolution following pneumonia do not ordinarily require a very large dosage, and ranges from 2 to 4 minims in children to 6 to 10 minims for adults three or four times daily. Regularity and system are the main points in these diseases. In asthma, if the case is severe, give 20 to 30 minims three times a day; in milder cases 10 to 20 minims will prove effective.

In glandular enlargements 5 to 15 minims t.i.d. In goitre 10 to 20 minims t.i.d., with occasional hypodermatic injections of a like amount (20 per cent. to 50 per cent. dilution) directly into the growth, will often accomplish recovery when all other remedies have proven useless.

In rheumatism and gouty enlargements 10 to 15 minims three or four times a day will produce results of the most gratifying character.

In syphilis, especially in its tertiary stage, 20 to 30 minims t.i.d. will be found satisfactory.

In septicæmia, very large doses are always essential. Where the temperature is 103 degrees to 105 degrees, from 50 to 75 minims every hour should be given until temperature falls, then the dose may be diminished. No fear of iodism need be entertained as long as the fever persists.

In auto-intoxication 6 to 10 minims t.i.d. in connection with some mild laxative such as *cascara sagrada* to clear out the alimentary tract will effect prompt and definite results when ordinary eliminative measures fail completely.

Burnham's Soluble Iodin should always be given well diluted and on an empty stomach. If desired, it can be combined with other agents or in *menstruums* such as essence of pepsin, cinchona, simple elixir, glycerin or *cascara sagrada*, bearing in mind always to gradually increase dose until curative effect is obtained.

The above few suggestions are offered in the hope that they may prove a valuable aid to the busy practitioner, and enable him to accomplish the results that can be obtained with surprising uniformity from this most reliable, safe and effective remedy.

For valuable literature showing the remarkable efficiency of Soluble Iodin (Burnham) when properly employed, address: Burnham Soluble Iodine Co., Auburndale, Mass.

The Genital Glands and the Dental System.

At the Academy of Sciences Robinson recently made a communication on the perfect preservation of the teeth in seven male donkeys aged between 10 and 14 years. These animals, which had been used in the experiments of Professor Lannelongue, were insusceptible of sexual excitement. Their food was hay. On the other hand, a young cryptorchid griffon, a very salacious beast, upon which the author had made a necropsy, had lost all its teeth when quite young. Toothache is said to occur in young masturbators, and it appears that true eunuchs have fine teeth, and the author concludes that a physiological relation exists between the genital glands and the dental system. The old belief of the effect of gestation upon the teeth may thus be true. As a result of his clinical observations. M. Robinson is satisfied that in diabetes and takes it is through the intermediary of the genital glands that the teeth become worn, carious, or simply fall out.—*The Lancet*.

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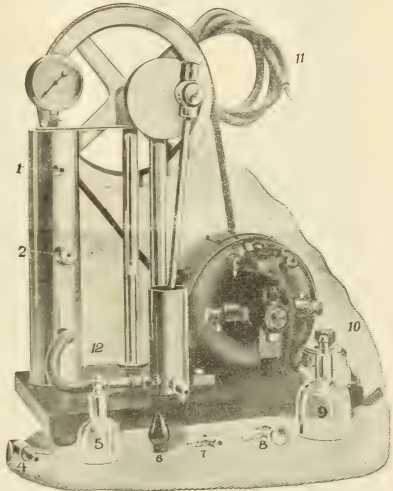
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(Clin. Journ.) Rolleston relates 6 personal cases which occurred among a total of 9075 completed cases of diphtheria and reviews the literature. Eighty cases are now on record; 28 were males, 37 females, and in 15 the sex was not stated. The ages ranged from one and a half to seven years. Right hemiplegia occurred in 48, in 21 of whom aphasia was noted, left in 27 and in 5 no details were given. The hemiplegia occurred at the following dates: First week 1 case, second week 14, third 27, fourth to seventh 12. In 14 cases where no exact date is given it is said to have occurred in

convalescence; in 12 no date whatever is given. Recovery took place in 52, though in only 4 was there complete restoration of function, death in 24, and in 4 no details are given. Necropsies were held in 18 cases. Embolism was found in 13, thrombosis in 3, hæmorrhage in 1, and eclerotic atrophy in 1. In all the cases in which details are given the initial attack was severe. Albuminuria and ordinary diphtheritic paralysis were present in a large number. Reference is made to the relative frequency of embolism in diphtheria (of British Journal of Children's Diseases.

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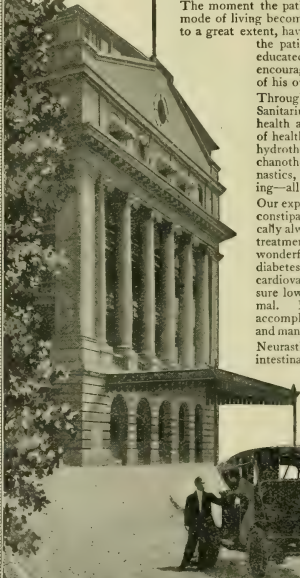
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705 S. Third St., Louisville, Ky.

Albert E. Sterne, M. D., Pres., Indianapolis.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Old Point Comfort, Va.
December, 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.

Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Mobile, Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.

R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.

W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Olando, Florida,
May, 13, 1914.

J. D. Fernandez, M.D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Baton Rouge, La. 1913.

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141 Elk Place, New Orleans, La.

B. A. Ledbetter, M. D., Pres. New
Orleans La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Vicksburg, Miss., 1913.
Date not yet decided.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

S. W. Glass, M. D., Pres., Dublin, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

L. S. Peters, M. D. Pres. Silver, City N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

Edgar A. Hines, M. D., Sec., Seneca, S.C.

W. M. Weston, M. D., Pres.,
Columbia, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Memphis, Tenn.,
April 7-9, 1914.

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CONCLUSIONS

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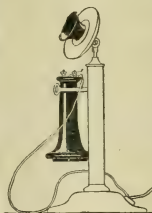
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Medical Society of the State of North Carolina meets in Raleigh, June, 16, 1914.

The Tri-State Medical Association of the Carolinas and Virginia (only members of State Societies eligible). Next Annual Meeting: Wilmington, N. C. Date of meeting February 1914, President, Southgate Leigh, M. D. Norfolk, Va., Secretary Treasurer, Dr. Rolphe Hughes, Laurens, S. C.

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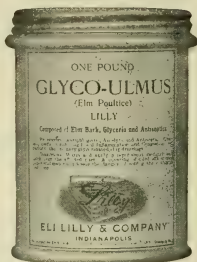
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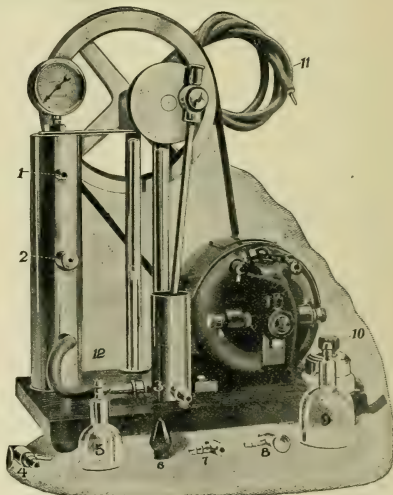
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Some Perversions of Justice.*

By L. S. Foster, M.D., Norfolk, Va.

The text-books say, "A criminal is insane if he does an act whose nature and quality he does not know, or, if knowing the nature and quality of his act, he does not know whether it is right or wrong."

Time was in the history of our laws that the veriest lunatic was debarred from pleading his providential affliction as a defence to his contracts. It was said in justification of so absurd a rule, that no one should be permitted to stultify himself by pleading his own disability. So great a jurist as Lord Coke, in his attempted classification of "madmen," laid down the legal rule of criminal responsibility to be that one should "wholly have lost his memory and understanding," as to which Mr. Erskine, when defending Hadfield for shooting the King, justly observed, "no such madman ever existed in the world." After this great and historical case, the existence of a delusion was recognized in effect as the legal rule of responsibility.

Before this time Lord Hale had declared that the rule of responsibility was measured by the mental capacity possessed by a child fourteen years of age, and Mr. Justice Tracy and other judges had ventured to decide that, to be non-punishable for alleged acts of crime, "a man must be totally deprived of his understanding and memory, so as not to know what he was doing, any more than an infant, a brute, or a wild beast. In 1812 the test was held to consist in a knowledge that murder was "against the laws of God and nature," thus meaning an ability to distinguish between right and wrong in the abstract. This rule was not adhered to, but modified to make the test rather a knowledge of right and wrong as applied to the particular act.

As far back as 1843, in the case of McNaghton decided before the English House of Lords, it was held that in order to entitle the accused to acquittal, it must be clearly proved that at the time of committing the offense he was laboring under such a defect of reasoning from disease of the mind as not to know the nature and quality of the act, or if he did, not to know what he was doing was wrong.

No one can deny that there must be two constituent elements of legal responsibility

in the commission of every crime. 1st. Capacity of intellectual discrimination; and 2nd, freedom of will. Mr. Wharton, after recognizing this fundamental and obvious principle, observes, "If there be either incapacity to distinguish between right and wrong as to the particular act or delusion as to the act, or inability to refrain from doing the act, there is no responsibility." Says Mr. Bishop, in discussing this subject, "There cannot be, and there is not, in any locality or age, a law punishing men for what they cannot avoid."

No one can spend an hour in the wards of an hospital for the insane, without being impressed with the fact that the whole management of such an institution presupposes a knowledge of right and wrong on the part of its inmates. In the learned treatise of Drs. Bucknill and Tuke on Psychological Medicine, the legal tests of responsibility are discussed, and the adherence of the Courts to the right and wrong test is deplored as unfortunate, the true principal being stated to be, "whether in consequence of congenital defect or acquired disease, the power of self-control is absent altogether or is so far wanting as to render the individual irresponsible."

We are therefore forced to conclude that the right and wrong test will not do in this present advanced stage of medical science. The criminal code of Germany contains the following provision, "There is no criminal act, when the actor at the time of the offence is in a state of unconsciousness or morbid disturbance of the mind, through which the free determination of his will is excluded."

Those of you who have had any experience in a hospital for the insane must know that because they do know right from wrong is why we can maintain such remarkable discipline. Three hundred insane could not be assembled in one dining room for their meals with perfect ease and more order than you would find with the same number of sane people, if they did not know right from wrong. This is the principal factor which enables us to manage such a large class of defectives with system and order. This brings us to our own Supreme Court, which holds "that he must understand the nature and character of his act and its consequences and have a knowledge that it is wrong and criminal and a mental power sufficient to apply that knowledge to his own case and to know, that if he does the

*Read at recent meeting of Virginia State Medical Society.

act, he will do wrong and receive punishment, and possess withal a will sufficient to restrain the impulse that may arise from a diseased mind." In other words, if the criminal did not possess a will sufficient to restrain the impulse which arose from a diseased brain and had not the mental power, because of a diseased brain, to know that the act was wrong and criminal and a mental power sufficient to apply it to his own case, the criminal is not responsible for his act.

A little more than a century ago lunatics were not regarded as unfortunate sufferers from disease, but rather as subjects of demoniacal possession or as self-made victims of evil passions. They were not cared for humanely in hospitals erected for their special care and treatment, but were incarcerated in jails, punished with chains and stripes and often sentenced to death by burning or the gibbet. The progress of Christian civilization has asserted itself and our institutions for their care and treatment are modern in equipment and managed with a singleness of purpose to give them the best the State can afford, and with this modern housing and treatment the medical jurisprudence of insanity has assumed an entirely new phase, the nature and exciting causes of the disease have been thoroughly studied and more fully comprehended. The result is, that the right and wrong test, as it is sometimes called, which, it must be remembered, itself originated with the medical profession in the mere dawn of the scientific knowledge of insanity, has been condemned by the great current of modern medical authorities, who believe it to be founded on an ignorant and imperfect view of the disease.

I give three cases which have come under my observation to show how some juries have failed to do justice to the defendant, because, I presume, of their lack of understanding the medical testimony. A physician of high standing in his profession and his community, was called to see the wife of a minister in confinement; about three days thereafter, early in the morning, the minister called at the doctor's house. The doctor went to the door thinking something had gone wrong with the patient, but, instead, he found the minister in a great rage, informing him that he had been too familiar with his wife. The minister immediately produced a pistol and shot the doctor to death. In due course of time the trial came on; several experts testified that the minister was insane. There was no testimony to show that the doctor had conducted himself in any other manner than that of a gentleman, and yet the jury gave a verdict of manslaughter with a peniten-

tiary term of three years. During his confinement in the penitentiary his wife had opened a store in a nearby town and after his release he returned to her. In a very short time he entertained the delusion that every man who came to the store, came for the purpose of being familiar with his wife, and he thereupon prepared himself to kill another man; before he could accomplish his end, however, he was with difficulty arrested and committed to an hospital for the insane, where he now is and will be the remainder of his life. On one occasion, several years after his commitment, he threatened to kill the superintendent because, as he charged, a clairvoyant had informed him in the night that the superintendent had been writing letters of a familiar character to his wife. Such is the man that a jury of twelve men would send to the penitentiary for three years for murder.

The second case is a man whose wife had been an inmate in a hospital for the insane, with acute mania. She had improved sufficiently to justify the superintendent in giving a furlough, which he did after a faithful promise on the part of the husband to take good care of her and return her to the hospital if she did not improve. This he failed to do, she became worse and escaping from her home, went to New York City. After avoiding the police in Central Park for nearly a week, she was captured, taken to an hospital for the insane and returned to her former institution. Under treatment, she improved rapidly and was getting quite normal again. While in New York the husband made no effort to locate her, thinking, as he said, that "she had gone to Italy, her former home," but as soon as he discovered that she was in an hospital for the insane he repeated his former efforts to have her released on furlough. In his final effort he brought many letters from prominent people requesting to be allowed to take his wife home; his efforts were so persistent and his manner so unreasonable that the superintendent did not consider him responsible and refused the request. About a week later he again came, bringing a physician of his own town to intercede for him. The physician was informed that under no circumstances would the patient be given a furlough unless he would assume all responsibility for her and return her to the institution, if she did not continue to improve. This he agreed to do. On their return home the husband, while in conversation on the train, took a pistol from his pocket and said, "If the doctor had not permitted my wife to return with me, I would have given him the contents."

After being home about six weeks she grew worse, and he, realizing that she would

have to be returned to the hospital and that he would not be able to obtain another furlough, shot her while in bed and then proceeded to prepare the corpse for burial. He did not tell what he had done to any one until he had robed the body for its last resting place, himself.

At his trial several experts testified that he was insane, yet the jury found him guilty of manslaughter and fixed his term in the penitentiary at nine years. After serving his term in the penitentiary, he will be turned loose upon the community to commit some crime, as revolting as the one just described, depending only upon the form of his delusion.

The third case is that of an insane epileptic, a boy of eighteen, who, in a state of jealous frenzy, shot his sweetheart. At the trial it was shown that this boy had been the subject of epileptic seizures; his mother had always been in feeble health, the father in youth had chorea and as a man was always nervous and excitable. The boy was very backward both in walking and talking and up to twelve years of age was never well. His growth was slow, being very small for his age. When nine years old he had a severe case of typhoid fever. At about ten years of age he had a severe blow on the right side of the head, one inch below the median line and near the junction of the frontal bone with the parietal. At the time of the trial the indentation was perceptible. After this blow, he had epileptic seizures, and continued to have them at various intervals, some not so severe as others. He slept badly and had a variable appetite, sometimes he ate ravenously. He was a very dull boy at school, not able to study, could not write his name, except in a stereotyped way, could not read. He had always manifested periodical spells of melancholia or of hilarity, such as laughing and dancing without apparent cause. There was much rigidity of the pupil, a condition which occurs in epilepsy. There was also enfeeblement and retardation of mental development in early childhood, showing an originally defective nervous organization. He was able to do some work, but would suddenly leave his place of employment and remain away from work and home for several days at a time and was not able to give any account of where he had been, or what he had been doing.

The insanity of epileptics develops suddenly, before a convulsive seizure, after the attack, or it may occur in the interval between the epileptic convulsions as a so-called psychic equivalent; as a rule, both onset and termination are sudden. The chief characteristic is a clouding of consciousness, and in this condition there are

irresistible impulses to assault, destructiveness, homicide or suicide. Like the somnambulist, such patients may seem to be conscious, may comport themselves, in speech and conduct, in a perfectly natural manner, and in this condition, which may last for hours, days, or even weeks, commit offences against the law, wander off as tramps, or do some other extraordinary thing. It should be borne in mind that whether consciousness is lost or merely clouded, the condition is one of mental disease and any remnants of self-control that may exist do not materially affect the case; the patient is, or should be, legally irresponsible.

This is one of the forms of mental disease in which, though the patient is quite aware that he is about to do wrong, the will becomes over-powered by the force of irresistible impulse, the power of self-control is destroyed, or suspended by the mental disease. The so-called moral or emotional causes of insanity are for the most part only evidences of a strong predisposition or pronounced mental instability, that requires only the slightest storm or touch to disturb its balance. To suggest the act at this stage is to insure its execution; whereas, with the normally constituted person the inhibitory power would assert itself.

This is a brief outline of case number three and yet the jury found this boy guilty of murder in the first degree and he was executed, in my opinion a judicial murder. What is the remedy for such perverted justice?

As a logical proposition, it appears that no twelve men should be considered competent to give an opinion on the complicated question of insanity, who are all ignorant of the characteristics and peculiarities of a disordered intellect and of the strange caprices and pathological conditions of the human brain, together with the influences of external and internal agencies in working its manifestations. Yet in criminal trials, where insanity is pleaded as a matter of defense, the jury, none of whom may ever have seen an insane person or have previously given a moment's consideration to the subject, are called upon and must decide whether the brain in a particular case is sufficiently free from disease to enable its possessor to form an accurate judgment between right and wrong, or whether he possesses withal a will sufficient to restrain the impulse, that may arise from a diseased brain. No man is expected to pass an opinion worthy of serious consideration upon a question of electricity, who has not given special attention to that science, and neither would the judgment of the leading theologian be of great value on

an intricate matter of surgery. It would be entertained as extremely ridiculous to bring forth such testimony in support of any case requiring for its elucidation a profound knowledge of electricity or surgery. In the support and on the defence of the plea of insanity, the jury must depend principally upon the evidence of medical men and if the jury have not given serious investigation to the subject of the manifestation of mental derangements, it can be seen how perilous is the position of the unhappy prisoner, although an irresponsible agent, charged with the commission of a capital crime.

In my judgment, the only remedy in cases where the verdict must be based upon medical testimony, is to have a jury of competent physicians, selected by the trial judge. While the law exempts physicians from serving on juries, because of their calling, there is no law to prevent them from doing so, if they so desire. The doctor is a citizen, usually a good one, and as such it is his duty to render such service to the State in the promotion of justice as is expected of good citizens generally, especially so when, because of his peculiar fitness, he is better able to render justice in a cause at bar. The presiding Judge is the judge of the law, and the jury must be the judge of the facts. Therefore, with a jury of competent physicians, when in a criminal case the question of sanity or insanity is involved, or in a civil suit where the question of disability or effect of or extent of injury, is the feature of the case upon which the jury will ascertain the amount of damages, if any, no one will deny that a jury of doctors could better interpret the facts than any other class of citizens and justice more evenly balanced.

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Phthisis Pulmonarius, or Wasting of Lung Tissue by Disease.

By A. T. Cuzner, M.D., Gilmore, Florida.

We have used the above heading as the most appropriate to the diseased condition of the human body we are about to consider in the following thesis.

First. Is this disease contagious, or contracted by coming in contact with one having the complaint?

Second. Is it infectious, that is, are the emanations from this disease poisonous to outsiders who are in close and constant attendance on the person thus diseased?

Third. Is this disease hereditary, or can

it be, and is it, transmitted from parents to offspring?

Heredity.

Heredity is but the sum total of the modifying environment of our ancestors, plus the initial potentiality of the germ.

Again this heredity is, in its turn, modified by the environment and conditions of life of the young infant.

Once more, heredity, in a vast majority of cases, is but the transmission from the parent to the cell and onward through the tissues, of peculiarities of the parents, in accordance with an immutable law of nature for like to produce like.

There is likewise a resistant opposition to change in the original organization, but which can be, and is, modified by circumstances and conditions.

My answer to the first question is no! It is not!

Vast clinical experience proves this.

The answer to the second question is a qualified yes. We will, later on, further consider this question.

The answer to the third question is a qualified no. To be also considered in detail further on.

Nature of the Disease.

This, as the above heading implies, is a destructive process going on in the lung tissues, which, if not arrested in time, will result in the death of the entire body.

Now the lung tissues are a vital necessity to the body, inasmuch as they are the means by which oxygen is conveyed to the blood, and, as we know, the absence of oxidation means death to the body.

Let us look a little closer into the exact nature of this morbid condition; for a clear understanding of the nature of this diseased state will enable us to do much towards a cure, and much more towards a prevention of its occurrence in the, as yet, non affected.

First. What is the structure and function of normal healthy lung tissue?

In structure, lung tissue consists of minute elastic tubes terminating in elastic air vesicles.

Their function being to absorb oxygen and exhale carbon dioxide.

The diagram Fig. 1 illustrates the process by which this is accomplished, viz., by endosmosis and exosmosis.

The oxygen of the air being absorbed by the hemoglobines through the infinitely thin coating of the minute blood vessels surrounding the air vesicles; the carbon dioxide being exhaled at the same time.

Now these tubes and vesicles are, like all other tissues of the body, liable to take on what is called an inflammatory process,

when adequate exciting cause is presented to them.

Second. What character, or conditions do these tissues exhibit, when by excitation from without, aided by a lowered resistant state of vitality, they present to our view this disease we call *Phthisis*?

Just here we will pause to consider briefly, as an aid to a clear conception of this disease.

Cellular Pathology.

Animal tissues are resolved into an aggregation of morphologic units or cells, each having a life history of its own.

At their death they are resolved into effete material, very deleterious to healthy cells, if retained in the tissues.

Many tissues, when diseased, become the home of minute forms of life—pathogenic bacteria.

All cells are the result of the life of previous cells, "*omne vivum ex ovo*."

In the course of its development, every cell proceeds from the condition of a unit, in which it resembles every other morphologic unit, through a series of stages of gradually increasing divergencies, until it becomes an element or part of a special tissue.

The vital functions of the cell may be enumerated as follows:

Contractility, irritability, and automatism, reception of nutritive material and its assimilation, metabolism, secretion, excretion, and finally reproduction.

All cells are sensitive to, and influenced by their environment.

They are repellent to deleterious influences in proportion as they possess that force or principle which we call vital.

On the contrary, as they lack this force, they are open or subject to the invasion of disease.

This may be in the form of toxins, or pathogenic germs, or both combined.

The healthy cells of animal tissues are antagonistic to the invasion of disease.

All cells, whether of animal or vegetable origin, fulfill alike the law of their being; derived from a parent cell, they are nourished, develop, reproduce and die.

During their life history they are favored or injured by their environment and circumstances over which they have but slight control.

Take, for example, cells of animal tissue exposed to contact with the atmosphere and subject to its vicissitudes, such as low temperature and sudden changes, their force (we call it vital) being reduced to a very low ebb for the time being; in contact with such cells is brought the ubiquitous microbe and there is at once inaugurated a conflict;

which will come out victorious depends on various circumstances.

If the animal cell has sufficient resistance, then the microbe is a failure.

On the other hand, should the vitality and resisting power of the cell be very low, and other circumstances favorable, then the microbe is rampant.

This may be called the irrepressible conflict sung of by the poets.

To resume our study of the lung tissues in disease. First, we will consider a morbid condition of a portion of the body subject to ocular demonstration.

Take, for instance, a thorn or splinter in the skin or flesh. Here we have as a result—that is if the thorn is not speedily removed—an inflammation followed by a breaking down of the surrounding tissue.

As a consequence of the death of tissue surrounding the thorn, or splinter, we have a collection of what is still called pus, or matter, which finally by pressure bursts through the skin and liberates the splinter.

Now when the tubes and air cells of the lungs are irritated by any substance, or condition, they take on a like inflammation, which may, or may not, continue to the stage of breakdown, or suppuration.

When many adjacent cells are involved in such inflammation and breakdown we have a cavity formed, and in proportion to the amount of tissue involved, we have the lung as a whole crippled in function.

Very few in normal health use more than 75 per cent. of their lung tissues.

Predisposing Cause of the Disease.

First. An inherited favorable condition predisposing the subject to take on the disease when due exciting cause is presented to it.

Such condition makes the lung tissue a receptive soil, a favorable culture medium for the foreign ubiquitous germs, or bacteria, called "tubercular bacilli."

That condition, which of old was called "diathesis," or susceptibility, which is of itself a disease, or a departure from the normal is, in my opinion, the most important element in this morbid complexus termed consumption.

Second. We believe, likewise, that this condition, while seldom inherited, may always be acquired under conditions and environment favorable to its development.

We also believe this disease is essentially built on a foundation of *malnutrition*—taking this word at its full valuation.

Likewise poor or faulty elimination.

Malnutrition.

Just here we will pause to give examples of malnutrition and note the result.

Not only do we believe malnutrition—

taking this word in its broadest sense—as being the greatest predisposing cause of phthisis, but likewise of many other diseases too numerous to be mentioned here.

We need not be ashamed of the old-fashioned belief that our own bodies are alive throughout and perform all the operations of working, thinking, etc., by virtue of their own inherent vitality, which they inherited from the germ, and in doing this they consume their own substance, which has to be perpetually replaced by new material, good or bad, its quality depending largely upon the manner of its working up in the body.

The course of our evolution as healthy or sickly individuals largely depends on ourselves, subject, however, to the influences of our environment.

We may, according to our daily conduct, be building up, or breaking down, a better or a worse body; likewise this applies to the mind as well as the body.

Dr. W. Mattieu Williams, in a walk through Italy extending from the Alps to Naples, and from Messina to Syracuse, experienced great hardships at times, and a lacking of nutritious food.

During his first journey he never met a drunken Italian or many diseased persons; on his second journey, which was preceded by a period of trouble and scarcity to the Italians, consisting of three "plagues," as they call them—the potato disease, the silk-worm fungus and the grape disease—had brought about general privation, and much drunkenness and disease. Monotonous "polentia," a kind of paste, or mush, made of Indian corn meal, to which they gave the name of "miserabile," was then the general food.

The slums of our cities, and their foul unsanitary tenements, are prolific breeding places and hot-beds for phthisis; our prisons and the general vile treatment their inmates receive, are likewise prolific sources of this disease.

Upon examination of the death records of thirteen prisons located in different parts of the country, we find the deaths from phthisis to be 95.9 per cent.

Doubtless tuberculous deposits could be found in remaining 4.1 per cent.

Exciting Causes.

These are too numerous to give them all in detail, hence we will mention but a few of the most prominent ones. However, we will state the following as a rule.

That any condition of life in which the body tissues are not properly nourished, and where a proper elimination is not present, and where the supply of pure air is limited, added to which is a constant tak-

ing into the air passages of foreign particles, thereby irritating these air cells—these are all exciting causes—as an accompaniment we have the tubercular bacilli.

Hence we find those persons who live in close unsanitary quarters, and not being properly nourished, are most prone to take on this disease.

Likewise those engaged as potters, bakers, stone cutters, miners, and other occupations in which fine particles of foreign material are floating in the atmosphere, are all liable to this complaint.

But of all the exciting causes, the "tubercle bacillus" is generally recognized (however erroneous) as the principal exciting cause of this disease.

We would further state that, when in the course of ordinary wear and waste, or extraordinary wear and waste, or following inflammation or injury, or from any cause, or combination of causes, degraded tissue elements have been produced, it is highly probable that the tubercle bacilli, or other microbes finding therein a favorable soil, modify and increase, and by their activity and life process, aid the further evolution of the disease.

This is well illustrated in the life work of the gall-fly.

By its sting, or the poison it injects, or the presence of the eggit deposits in vegetable tissues, or all three combined; the plant infected is caused to put on an abnormal growth and development.

Consequently in a careful summing up of the facts, as reflected by both observation and experience, relative to the causation of tuberculosis, we think we are warranted in coming to the following conclusion:

First. Malnutrition is the starting point of the tuberculous process.

Second. No doubt the retention in the body tissues of excrementitious material, the result of metabolism, aids this process.

Third. The tuberculous bacillus is doubtless the most important of the germs present in this disease, yet we believe it does not, of and by itself, originate the disease in any of its forms, as found in the body.

Fourth. Both factors, the dyscrasia and the bacillus, must exist in combination before there can be tuberculosis.

Hence the principal effort has been, and should still be, to destroy, or render innocuous, the tubercle bacillus, and correct the soil in which it proliferates best.

Bacilli.

Bacteria, microbes, schizomycetous fungi, are minute vegetable organisms causing the different known fermentations, and found associated with certain diseases, of which

they are considered, by many, to be the origin and cause.

Tubercle bacilli are in length one-half to one-third the diameter of a red corpuscle, and their breadth is about one-fiftieth of their length. (See illustration, Fig. 2).

Bacterium.

Fig 2.

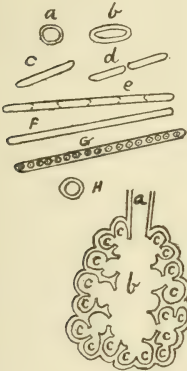


Fig 1.

Single Lobule.

- (a) Ultimate bronchial tube.
- (b) Cavity of lobule.
- (c) Pulmonary cells, or vesicles.

There is a cycle of changes in the life of a bacterium which is plainly shown in the illustration.

First. We have the spore *a*, which in *b* is seen to have lengthened to a rod *c*.

By continued elongation and fission more rods, which afterwards remain apart or join together and form a chain *d*. Some of the rods lengthen into filaments *f*; these develop spores *g*.

The spores being set free, *h*, the series of changes begin again.

The writer's view of the functions of the microbe is as follows:

The cell formation of our bodies is constantly dying, as the life force leaves it and its work is done. The same principle holds good throughout organic nature.

All organic tissues undergo three distinct phases in their history—growth, decay, and disintegration, and these three processes may go on simultaneously.

In consequence of the dying of the cells,

there is a continual accumulation of dead matter that must be disposed of by some process or processes.

As one of these, the microbe gets in his work.

Each microbe has his own particular work to do. In certain stages of tuberculosis we find more than one microbe associated with the disease.

I do not think microbes deserve the ill repute in which they are held.

When the human organism is diseased, microbes are found to be much more abundant, the dead matter to be changed and eliminated requiring much more work on their part.

Like the buzzard, they are always ready to remove dead and offensive animal tissues. They also act as media of disease, just as flies do.

They have likewise the power to impose upon the cell a certain amount of force, that tends to produce a condition most favorable to their disintegrating work.

We will now devote some space to a consideration of the part played by the bacilli in phthisis.

Tubercle Bacilli.

These are parasitic growth-forms of a mould.

The true moulds are aerobic and capable of forming spores only with access of air.

We generally find moulds, therefore, parasitic only upon the surface of the body, or the mucus membranes. Hence their favorite resort are the air passages, because there they find a suitable nidus to proliferate in.

(The reader must not assume from this that these micro-organisms can only exist where there is free access of air, for Pasteur has demonstrated that they can become anaerobic in their make-up, and obtain oxygen from the tissues in which they may be found located).

It is not safe, however, to reason, or assume, they are the principal cause of the disease phthisis. This location is simply a congenial home for them.

We might, with equal reason, assume that the fly and the maggot are the necessary cause of putrefaction in flesh.

Putrefaction will go on in flesh in the absence of the fly or maggot, provided the necessary moisture, temperature and air are present.

The fly may be present, but if the temperature is sufficiently low, the putrefactive process will not go on.

Another illustration. The earth, or soil, is the original and only source of life manifestation.

It may contain both organic and inorganic

material necessary to life development, but if the temperature is too low, and there is a lack of moisture, life will not manifest itself.

The tubercle bacillus is ubiquitous.

With every breath, we take in these spores by the million, yet if the lung tissue is healthy they find no welcome reception and fail to develop.

When treating above on cellular pathology, we stated, "All cells are sensitive to and influenced by their environment."

This applies to the microbe as well as the cell it invades.

Hence whatever tends to reduce the number of tubercular bacilli will have the effect of reducing the amount of disease existent, and the number of persons affected. Prevention is better than cure.

Curability.

That this disease is curable, when not too far advanced, has been and is demonstrated clinically every day.

We have had a number of cases declared to be incurable that have recovered a fair measure of health, but with crippled lung tissue, and who have lived many years since their doom was declared.

But the work of the eradication of this fell disease depends more on the social conscience in action, than any therapeutic work of the doctor.

Let us physicians awake to the fact that as a body "we are our brothers keeper."

Let us rouse the public to a realization of the fact that it is suicidal for occupations to go on without let or hindrance, while unprovided with sanitary and preventive measures.

The slums and foul tenements must be eliminated; the cause of these must be sought out, and a remedy provided.

That this disease can be, and is cured was demonstrated in the dissecting room in the presence of Dr. Austin Flint many years ago by the writer, at Bellevue.

He (Dr. Flint) remarked on one occasion, as reported by Dr. H. B. Weaver, "You take away the lives of the bacilli, when you take away the means by which they live."

As to the treatment indicated:

Shall we endeavor to destroy the microbe, and with this object in view, continue to experiment with serum therapy, or shall we by a rational system of hygiene and of nutrition, build up and fortify the system against the inroads of the bacillus?

As to hygiene:

There can be no doubt that an abundance of pure air and sunlight go a great way toward arresting this complaint, therefore those afflicted with this disease in its earliest stages should, by the advice and

direction of their physician, seek that country where the largest amount of each can be obtained during the year.

Treatment.

Dr. Andrew H. Smith, quoted also by Dr. Weaver, said in speaking of phthisis: "The fact should be realized that tubercle bacilli never become implanted in the healthy system. There is always an anterior condition that should receive our attention. * * * By sufficiently improving the nutrition you lift the patient above the plane on which the bacillus flourished."

The family of the moulds do not flourish in sunlight.

Climate.

We will state what we consider to be the best country and climate for the preconsumptive, and the actual victim of disease itself.

The best places and climates are those where the patients can enjoy the greatest number of days and hours in the open air and sunlight, in an equable temperature.

Hence we prefer Florida for an all the year round residence.

However, we believe there are some patients who do better breathing the salt air of the ocean. Others a dry air. Others again, are most benefited by mountain air.

Physical Exercise.

As remarked above, I think it may be safely affirmed that the average healthy individual seldom uses over 75 per cent. of the air vesicles, 25 per cent. remaining in a collapsed condition.

These unused vesicles are favorite sites for the commencement of disease.

We hardly need remind our readers that failure to use means partial paralysis.

Again, the object of respiration being to obtain a supply of oxygen to be used in the vital functions, any diminution means low vitality.

There is a very instructive article in the Medical World for October, 1897, of which the following is a synopsis:

"Dr. W. F. Ball, Canton Station, Ohio, writes that in 1851-2 he contracted a dry hacking cough, with morning expectoration; had chills and hectic fever for months and lost much flesh; was pronounced by several physicians as incurable.

At this time an old Canadian doctor visited his father.

'He examined me thoroughly, and said there was only one way to save me, which was to carry out his instructions faithfully.

I was to sit up in bed and throw shoulders up and backward, filling the lungs with air to their utmost extent, until pain warned me to stop; then to press down on the air to make it fill every cell.

The closed cells, which were sealed by adhesions so that they could not be opened, were thus surrounded by healthy cells, and the diseased tissue would suppurate and be thrown off.

It worked exactly as he told me.

I have practiced these inhalations for over 40 years, and I can now, at the age of 62 years, expand my lungs to such extent as to increase my chest measure five inches, and I never have a cough to trouble me."

Pure Water.

It is very important that tuberculosis patients should have an abundant supply of pure water.

Water being a universal solvent of organic material, it is therefore very necessary that no filtration from closets or cess-pools be allowed to contaminate the source of supply.

I prefer and instruct my patients to drink large quantities of hot water, as I believe this promotes excretion of deleterious substances from the body, and adds to its functional activities.

Frequent bathing of the body is of great use to patients.

A sponge bath at night will often allay excitement and give patients rest.

Drug Therapy

Every qualified physician will have to administer some drug medication.

The writer is an alkalometrist, and we prefer to administer such drugs, when applicable, in the form of graules or tablets, of known strength, to galenical preparations, and use by preference those of the Abbott Alkaloidal Co.

For irritability of cough we prefer Emetine, and consider opium, in any form, worse than useless—unless it is in the form of H. C. M. tablets in divided doses.

The cough being for the purpose of rejecting from the lung tissue the pus and mucus formed there.

We give Nuclein as a reconstructive.

Now we find by examination of sputa, and other excretions, that there is an undue loss of phosphates which must be met by food and drugs.

Again, we know that iodine, in some form, is one of our best, if not the best, antiseptic and germicide we have; hence we administer, as one of our remedies, Calx Iodata, likewise Calcium Lactophosphate.

We have found great advantage from the use of the antituberculosistablets (Abbott's). The formula is as follows:

Strychnine, gr. 1-67

Iodiform, gr. 1-6

Calcium Lactophos., gr. 1-6

Nuclein Solution, Min. 5

This preparation we believe, from clinical

experience, arrests vital decay, destroys the excreted virus of the tuberculous germs, thus antidoting its poisonous action on the leucocytes while they are engaged in their work of destroying the germ parasites.

The nuclein reinforces the vitality of the cells of the tissues; while the phosphorus and lime brace up the nervous impulse; the strychnine toning up the system generally.

The iodine and arsenic, in their turn, being the main fighters of the invading parasites.

Diet.

We now come to what, in our opinion, is the most important part in the treatment of tuberculous patients, viz., the diet.

This should consist largely of animal foods, as being more easily digested and in a less bulky form, hence a larger amount can be appropriated. However fruits are equally called for.

Of these, animal foods, eggs and milk should preponderate; and butter milk is better than fresh milk, containing as one of its ingredients lactic acid, one of the natural germicides.

We prefer to give the eggs raw when tolerated by the patient.

The albumen of the egg is similar to blood albumen, and is digested, or rather it is absorbed into the blood, without undergoing an elaborate digestive process.

I have found the white of the egg mixed with water, tolerated when the yolk could not be borne by the stomach.

Bone marrow of the ox is of greater value than cod-liver oil.

Good creamery butter should be used freely, and to accomplish this result it should be spread *thickly on very thin slices of bread*.

Heavy meals should be avoided, but food should be partaken of in small quantities between meals.

Beef tea made from beef-extract, I consider positively injurious.

It taxes unduly the excretive functions of the body, and has very little nutritive value.

It is composed largely of excrementitious matter, such as is found in urine, and is largely stimulating and irritating in its action.

When I use beef-tea in my practice I have it prepared as follows:

Take a small quantity of gelatin, say about one teaspoonful, and dissolve the same in a cup of cold water.

When thoroughly dissolved add a small quantity of extract of beef for flavoring and stimulating purposes, then add a little salt and pepper, then heat slightly.

Fruit should be partaken of freely.

In fact, the aim of the physician should

be to endeavor by means of all the resources that the science and art of medicine has placed at his disposal to add to the digestive and assimilative powers of his patient, and thus give him or her the greatest chance for a cure of the diseased tissues.

I might continue this subject of feeding indefinitely, but enough has been written to show its supreme importance.

Hygiene.

It was formerly held that breathing the same air with a consumptive was highly dangerous.

It is now believed that only the desiccated sputa breathed into the lungs is infectious.

There can be no doubt that a certain amount of morbid material is exhaled with each expiration.

Carefully conducted experiments with the condensed moisture from crowded auditoriums prove this.

Very highly offensive putrid albuminoid substances have been obtained in this way.

Crowding consumptives into large sanitariums, in my opinion, is not good practice.

Far better for such patients to live in homes by themselves and attendants.

"Sunlight is nature's disinfectant, and experiments have shown that direct exposure to its rays for a few hours will destroy such germs as tuberculosis.

The old method of exposing infected linen, carpets, etc., to the sun has thus been proven of value, and the rays of the sun must often destroy many of the bacteria present in infected hospital wards.

This influence is also beneficial in destroying many of the bacteria deposited upon the surface of the earth, and even the upper layers of rivers must be somewhat purified by the agent."—Prof. A. C. Abbott, Philadelphia.

The sputa should be received into paper receptacles to be afterward burned.

We find in nature that living beings, animals, plants, and living tissues, whether of animal or vegetable origin, are continually undergoing certain processes, viz: growth or development, decay or death.

Both these processes go on simultaneously.

Professor Hammond says: "If we could perfectly adjust these so as to balance each other, man might live on forever."

By a partial adjustment we have increased the average longevity several years.

If the excreta of any kind are retained in the tissues, they produce disease, which is a slow form of death.

If, after they are removed from such tissues, they are absorbed or applied to other living tissues they produce disease.

If not thus absorbed such excreta under-

go further change or decomposition when exposed to the action of heat and moisture in the open air, evolving during such process foul gases very injurious to life.

But when placed in that great stomach of nature—Mother Earth—they are so digested that they are capable of becoming, by the absorption of different plants, parts of living organisms.

In densely populated communities the sewerage system of disposal of excreta is adopted.

In an editorial in the London Lancet, the editor in speaking of the sewerage system says:

"After all, it is not a perfect success. Besides defiling the Thames to such an extent that the stench from it is quite perceptible, the gases that arise from the opening of the sewers at every corner, which are inhaled by the passersby, are largely the cause of the many cases of diphtheria and typhoid fever which exist in this city."

It is a query in my mind whether it may not be better for us to modify our plans of disposing of the excreta and waste material of cities; whether the sanitary laws adopted by the Jews under the instruction of Moses would not be better.

We find that the Jews had their Gehenna, or Hell fire, located in the valley of Gi Hanuom, outside the walls of Jerusalem.

In this fire was consumed all that was vile and likely to taint human life.

Without discarding the sewerage system, might we not supplement it more fully, than is done at present, by the crematory system of disposal of all offensive substances?

In the family this process might be more largely used.

Let everything be burned in the stove that cannot be passed down the sewers, or buried deeply in the ground, if they live in the country.

The late Col. George Waring, of New York, states that "the foulest sewerage water passed through ten feet of clean sand comes out clean and pure."

Conclusion.

Now we know, by clinical experience, that Peroxide of Hydrogen destroys pus and purifies tissues, hence we believe if used as a nebulous spray in diseased lung tissues, much good might be obtained.

We have very few cases originating spontaneously except among the unsanitary living negroes, among whom, before the War, it was almost unknown, hence we have had few opportunities of trial.

What Can Teachers Do To Aid Public Health?

Paper prepared by Dr. C. W. Hunt, Brevard, N. C., and read to county teachers.

Having been requested, as county superintendent of health, to answer this question, a question of importance, I regret that I am unable to treat the subject as it deserves, involving, as it does, all the principles of hygiene and preventive medicine.

In this day of specialism the teacher occupies a dual position—not only to teach, but the modern parents are inclined to leave all of the cares of the child to the teacher, seeming to feel or believe that the teacher has full charge and is therefore responsible. Were this not the case the teacher has a greater responsibility than that of simply teaching the lessons; they have a great opportunity which carries with it a corresponding responsibility—that of building the body as well as the mind.

The body, that wonderful mechanism in whose intricacies is contained the mind and soul, should receive daily and special care as to its preservation, growth and perfect development. Book learning without proper bodily health and development is like placing a building on a foundation of sand. We cannot have proper, full and lasting development and mental vigor without simultaneous cultivation and conservation of the physical forces, therefore the body should be the teacher's first and continuous care.

The teacher's opportunity extends beyond the school room. Visit the home of the child and see that proper hygiene of the house and premises exist; that the sleeping room is well ventilated. In winter a narrow opening should be in the top of the window at the foot of the bed to eliminate contaminated air, and a sash covered with thin cloth fitted in the place of the lower sash at night. This allows the pure fresh air to sift through, avoiding drafts.

After proper bodily ablutions the child should be clothed and shod in accordance with the weather. Teach the children that the clothing is not only to warm and protect the body, but that extra over-coats and wraps should be used to prevent a too sudden chilling of the body after exercise. The sudden arrest of perspiration is a very frequent cause of colds and diseases, such as inflammation of the throat, grippe and pneumonia. "A cold should never be neglected." Upon arrival at school the feet should be warmed and dried and the child placed in a well ventilated and warm room, with proper light falling in a proper manner, over the left shoulder, on their books, and taught to sit with the shoulders well back to avoid stooping, and in studying

should be taught to hold the reading matter sixteen or eighteen inches from their eyes. For the proper protection of the feet and health in winter it would be well for each child after long walks over the country roads to remove the wet, muddy shoes and put on dry shoes and stockings, left at the school house for that purpose.

Neatness in personal appearance—well brushed hair, clean face, hands and finger nails—teach a proper respect for, and care of the body. Careless expectoration is untidy, and a fruitful cause of disease. A large per cent. if not all of the cases of tuberculosis could in time be prevented were it not for this thoughtless, selfish and oft-times malicious habit. The writer has witnessed people with this disease expectorating on all sides with a carelessness that argued a malicious intent. Frequent bathing should be taught, as nothing conduces so much to the healthful action of the skin and body.

Teach the children to chew their food well and to eat regularly, to avoid tea and coffee, and after each meal to clean their teeth. This not only preserves the teeth but keeps the teeth, gums, and mouth, that avenue through which so many disease producing germs enter the body, in a sanitary condition. Children with hollow teeth should be sent to the dentist. The scalp should be inspected and kept sanitary and healthy. Any weak condition of the eyes should receive immediate attention. The ears should be inspected for discharges. Children who have thick, throaty voices, who wear their mouths open while asleep and awake, should be examined for adenoids and enlarged tonsils. The latter is a fruitful field for the development and entrance of disease producing germs, such as diphtheria, grippe, and sore throat, and often causes rheumatism.

Teach the children not to put foreign substances in their mouths, unwashed fingers, pencils, paper, exchange ready chewed gum, nickles, etc., and not to make a waste basket and pocketbook of their mouths.

As a lesson in personal cleanliness, sanitation, and to prevent the spread of disease in school I would strongly recommend the use of the individual drinking cup, or, better, a sanitary drinking fountain in the building.

If a child is not well nourished and full of energy something is wrong, and the family physician should be consulted. A child badly nourished, lazy, and weak physically and mentally is nine times out of ten affected with hookworms or other parasites, or some chronic debilitating condition and should receive prompt and proper medical attention.

Report all suspicious and contagious diseases, such as measles, whooping cough, scarlet fever, diphtheria, fevers, smallpox, and tuberculosis, and also all persons who have been exposed to such diseases, to the health authorities. Obtain the co-operation of the parents, show them that you are working for them and their children. Teach the children and the parents through the children that the observance of the health laws as regards sanitation, isolation and quarantine of contagious diseases is for their benefit and not for the benefit of those who enforce the law.

Teach them that smallpox can be prevented by the easy and harmless operation of vaccination; that inoculation prevents typhoid fever; that a physician should be called to administer antitoxin on the first appearance of diphtheria; that the child should be examined every year for that body and mind enfeeblers, the hookworm. Sanitation should be taught in its individual and broadest sense. The person, the home and surroundings. Teach that flies should be fought, and that they can be totally exterminated. Let all of the pupils at school and home act as fly scouts, killing all the flies, and inducing their parents to aid by the removal of all garbage where-in they multiply; and screen all food and living rooms from these conveyors of disease. This would prevent many cases of sickness. The playgrounds should be kept in a neat and orderly condition, free from scraps of paper, tin cans, etc. The school should be screened from flies, and kept in the very best possible sanitary condition. All trash, dust, and bits of paper collected and put in a garbage can.

It should be the teacher's continuous effort until successful to obtain for the school, each and every school in the county, running water, and all modern conveniences should be insisted upon. If water cannot be brought to the school, the school should be taken to the water. If Mahomet cannot go to the mountain, the mountain must come to Mahomet.

In closing I would recommend that each teacher in the county should obtain through our capable superintendent of schools a copy of the American Medical Association Bulletin for May 15th, 1913, and read carefully from page 212 to 223.

Chronic Constipation in Women—Its Cause and Its Treatment.

By George Tucker Harrison, M.A., M.D., Charlottesville, Va., Consulting Surgeon to the Woman's Hospital, New York; Fellow of the Obstetrical Society, New York; Honorary Fellow of the Medical Society of Virginia, &c.

If we bear in mind the fact that patients have been subjected to operations with the diagnosis of gall stones, salpingitis, appendicitis, oophoritis, floating kidney, respectively, when, in truth, in each case, the pathological condition was chronic constipation and its consequences, I respectfully submit that in discussing this theme I am not carrying owls to Athens. In one case that came to my knowledge an excellent physician, practicing in New York, called into consultation two eminent surgeons who diagnosed a carcinoma situated in the ileo-cæcal region; a succession of high enemata showed, however, that it was a case of impacted feces in the cæcum and ascending colon. This physician was discharged just before the favorable result, and the homœopathist, who was called in, received the benefit of the cure.

That women suffer with constipation to a greater degree than men is a well established fact. The reason is not far to seek. One of the most important points to be observed in the way of prophylaxis is to acquire and maintain the habit of going to the closet every day at the same hour and remaining there for many minutes, soliciting the action of the bowels, if necessary. The natural time for evacuation of the bowels is after breakfast. After the rest of the night the food taken into the stomach acts as a stimulant, and the fecal matter already accumulated in the sigmoid flexure passes into the rectum, and with it the desire to evacuate its contents ensues. This call is often unheeded by young girls, from excessive modesty, especially in the case of school girls who do not like to go to the closet in the presence of others. Again the same thing happens in the case of women taking railway journeys. In these modern days women who have to earn their living as typewriters, secretaries, shop girls, &c., often find it inconvenient to attend to this function. The consequence is distension of the large intestine from habitual constipation associated with muscular atrophy. It is obvious that in the case of tumors that interfere with the action of the intestines as retroflexion of the uterus, myoma, ovarian neoplasms, &c., the constipation is mechanical. The co-operation of the abdominal muscles is an important factor in the expulsion of the contents of the intestine—a diminution in the expulsive power of the abdominal

muscles occurs during pregnancy owing to the great distension and also in consequence of a number of previous pregnancies. In the latter case there is often a diastasis of the recti muscles. Again, after child-birth, when repair of a lacerated perinæum has been neglected or improperly done, the muscles forming the floor of the pelvis are inadequate to turn the faecal mass from the direction in which it passes into the pelvis forward to the anus, hence the constipation ensuing.

There are a number of symptoms which depend entirely upon constipation, which simulate gynæcological affections. It repeatedly happens that every day there is a passage of faecal matter, while in fact above the sphincter tertius a section of the intestine is filled to a great extent. How often do we find the rectum filled with faeces, on making a vaginal examination, although the patient may have declared that she had had a satisfactory stool that morning—necessarily she is suffering with atony of the rectum. In convalescence from severe septic puerperal peritonitis or other febrile diseases associated with muscular weakness, and in old feeble women, the co-operation of the abdominal muscles is completely wanting and faecal masses accumulate in the large intestine. The fluid is absorbed and the masses become drier and harder and even stony concretions may form. Such a tumor may force the uterus against or above the symphysis pubis so that it displaces the vagina and pushes the posterior vaginal wall down to the vulva. Bearing down pains are felt and the condition is one of great discomfort. The expulsive forces are too weak to evacuate the hard masses and it is necessary for the physician to deliver them, piece by piece, by the finger introduced into the rectum or from the vagina by forcing the contents of the rectum through the sphincter.

One cause of obstinate constipation in women is the misuse of rectal enemata, continued through a long period of time—the consequence is atrophy of the intestine and especially of the rectum. In the case of severe and exhausting hæmorrhages the loss of fluid is substituted by absorption and the intestinal contents are dried, thus leading to constipation. When the sigmoid flexure is habitually filled with faeces the patient usually complain of pain in the left side. This part of the large intestine is very much elongated and extended, it may be so distended as to simulate one or more tumors. The pains on the left side are characteristic. As Fritsch truly observes: "How often is the physician quickly ready with the diagnosis oophoritis and salpingitis when it is simply the question of coprostatic

pains!" Examination may indeed demonstrate painfulness in the uterine movement and the ovaries, but the fact may be elicited that the pains occupy a higher plane than the site of the ovary. In these cases percussion demonstrates that the entire left side above the sigmoid flexure is duller than the right. It is true that this is physiological to a slight degree, but in chronic distension of the sigmoid flexure with faeces the dullness on the left side is very pronounced. When the transverse colon is the seat of impacted faeces it is a common occurrence to observe symptoms which, though really due to the auto-intoxication from the intestinal contents, simulate gastric and cardiac affections. Thus neuroses of the heart of an annoying character may manifest themselves, especially tachycardia. The pulse is rapid and the subjective symptoms are such that the patient is filled with apprehension, thinking her condition is one of deep gravity, as Fritsch¹ remarks, "the circumstance that, in such conditions, the respiration is quite normal and there is no dyspnoea, that the painful, irregular palpitations of the heart are promptly relieved by morphine, that vomiting usually immediately brings improvement, that the individual attacks recur often, at long intervals, that the heart sounds are normal, and that, above all, "In regulating the action of the bowels, the distressing symptoms definitely cease, establishes the correct diagnosis." As a consequence of coprostasis there may be pains in the region of the umbilicus or the liver and a false diagnosis of gall stones be made, the operation performed showing nothing of the kind. The accumulation of faecal matter in the cæcum and ascending colon has the effect of producing an enlargement of the right side of the abdomen, as compared with the left, this may be obvious to the patient herself. It may be demonstrated by the tape measure, measuring from the umbilicus as a centre to the anterior superior spinal process of one side and then to the other, when the difference will be in favor of the right side to the extent of two to six centimeters. The full cæcum may be ascertained by palpation and by the use of massage; the gurgling sound, created by the movement of air, water and faecal masses, becomes perceptible. It is a matter of record that many an operation for appendicitis has been performed when the diagnosis should have been coprostasis in the cæcum.

Several years ago, I attended in Nice, France, a highly cultivated and gifted lady of an elevated social position, at child-birth. The position of the child was an occipito posterior one and she was delivered

¹ Die Krankhaften der Frauen, 12th Aufl.

by podalic version. During the puerperium I found that the colon was distended by an immense mass of fecal matter. It was several days before she could be relieved. I found in this case, as in similar ones, that the most efficient resource at my command was ox-gall enemata. The inspissated ox-gall (*fel bovis purif.*) is rubbed up and softened with glycerine and added to hot water. It is astonishing that such accumulations should occur and the patient, all the time, be unaware of the true condition, although at times it does happen that the patient has ascertained herself that the right side is larger than the left.

With reference to treatment it is necessary to consider the merits and disadvantages of: (1) Drugs, especially aperients, with hygienic measures. (2) Massage. (3) Electricity. (4) Diet. (5) Surgical treatment. It seems to be true that the cause of chronic constipation is largely due to primary damage to the apparatus of the motion, that is the nerves and muscles of the large intestine, but as Dr. A. Schmidt, of Halle, has shown, "in chronic constipation a deficient quantity of undigested food-residue remains behind, correspondingly fewer bacteria are developed, and the proportion of decomposition-products generated, such as volatile and higher fatty acids, gases, &c., is insufficient to induce peristalsis." It is very desirable, therefore, to procure a substance which shall increase the volume and moisture of the feces, and at the same time have the advantage of being harmless and non-irritating, and such a substance we possess in agar-agar (*gelatina japonica*) prepared from sea-algae, chiefly *gelidium carneum* found in the far East and which consists principally of gelose (*pararobin*) which possesses, in a high degree, the faculty of absorbing moisture. In order to stimulate peristalsis in the large intestine it is necessary to combine with the agar-agar, cascara, and this is accomplished in the preparation of the substance known as Regulín. I have had a large experience with Regulín and can bear testimony to its efficiency in the treatment of chronic constipation. It is perfectly successful in the permanent cure of slight cases, but in difficult and long standing cases other methods must be adopted in addition. It is necessary here to state that a regular and uninterrupted administration of this remedy is necessary. It need hardly be mentioned that phenolphthalein is also an invaluable aid in preparing the patient for further treatment. A very simple but efficient method of treatment in cases of the less severe type, is to order the patient to sip a tumbler of hot water, a teaspoonful at a time. The important point is that the water

must be sipped a little at a time and must be hot and not tepid; it should be taken at night before retiring. Allusion has been made to the paralysis or rather paresis of the lower section of the large intestine which is due to the excessive distension. One of the best means to bring back the function of the rectum to a normal standard is *after defecation* to give several enemata of cold water. The cold water is a powerful stimulant to the rectum, and it must be irrigated until the water is returned clear. The enema should be given in Sims' semi-lateral prone position. Massage is one of the best, if not the best therapeutical measures at our command. It is executed with the patient in bed and the abdomen exposed. Commencing on the right side at a point corresponding to the cæcum, following the course of the ascending, transverse and descending colon, at first gently, and then more vigorously the parts are stroked with the flat of the hand, then kneaded with the front of the finger, especially the thumb, and lastly the parts are lifted up by the fingers, and followed by pressure. In the technical terms used by the French *Effleurage, massage a friction and pétrissage* are called into play. The patient may employ massage herself if she will use the abdominal massage ball. This is a hollow wooden ball, which is filled with shot. An opening in the ball allowing this to be done and then closed. The ball is carried up on the right side, then across and then downward on the left; this is repeated over and over again for about fifteen minutes, and then circular movements are made around the umbilicus as a centre. When one hand becomes tired the other relieves it. These balls are of different size, and are imported from Germany. The ball should contain four or five pounds of shot. It is impossible to exaggerate the importance of this method of treatment. In my hands it has proved invaluable. I call to mind a case in which a young girl was brought to me by her mother suffering from habitual constipation. Although only fifteen years of age, the patient was exceedingly tall and her face showed a pronounced case of acne. I recommended the use of the abdominal massage ball. She returned in a month or more perfectly well and related the fact that her teachers, finding the remedy so efficient, borrowed the ball in turn. She was at a boarding school in New Jersey.

When the impaction is in the ascending colon the effect of weight by the use of a bag of shot containing 8 or 9 lbs. laid over the ascending colon is most satisfactory. As Fritsch observes, "how many patients have I cured in this simple way by a bag of shot who came to me with the diagnosis

of oophoritis, salpingitis, appendicitis, floating kidney and gall stones." Before leaving the subject of massage, I would like to draw attention to the excellent results obtained by the use of massage in children. Electricity unfolds great power here, the faradic current being applied by preference. The patient is laid on a lead plate (10 cm. square) which is wrapped in a wet piece of cloth, a rolling electrode is carried on the abdomen in the direction of the large intestine. Strong currents are employed. A very excellent way of applying the electricity is to introduce a bipolar sound into the rectum as high up as 20 cm., the intestine being previously filled with water. A constant current, with frequent interruptions, may be used for five or ten minutes at a time as strong as the patient permits.

Diet is a matter of all importance. One of the best foods as a breakfast diet is undoubtedly corn meal. The corn meal found in the Northern States is ground too fine and many valuable ingredients are lost, but the coarser meal we have here favors peristalsis and should be used daily. Professor Dunnington, of the University of Virginia, a distinguished chemist, in a valuable paper states that "in fresh ground corn meal we have a supply of a vitalizing substance, 'tropogon,' which will be removed by long processes of rubbing, scouring, washing or bleaching in the processes of making grits or cream meal, or the manufacture of modern white flour." He sums up the facts as follows: "When white flint or dent corn is well matured, kept upon the cob until thoroughly dry, and then as it is needed, every two or three weeks, ground by buhrstones, turned slowly, it furnishes a sweet nutty flavored meal which combines the most valuable nutrients, and when cooked in the simplest manner, furnishes a food which is to many of mankind very healthful and acceptable." In chronic constipation it should be the staple of diet, especially in the form of batter bread. The Germans are fond of using honey with breakfast or two or three tablespoonfuls in hot water an hour before breakfast. It is well to eat as the first thing, some fruit, one of the best being apples. Green vegetables should be used freely, sweet potatoes, carrots, onions, Irish potatoes, spinach and cabbage—cabbage especially tends to act as a laxative, not only by the mechanical effect upon the intestine, but also by the gas that is formed. It is well to use at breakfast syrup or molasses or, as some prefer, marmalade. Of late an effort has been made to bring this morbid affection within the domain of surgery. Metchnikoff not only regards the appendix vermiformis as useless and dangerous but maintains

that "the whole large intestine must be regarded as one of the organs possessed by man and yet harmful to his life and health." It is a reservoir of waste and putrifying material, from which poisons are formed and in cases of constipation "certain products are absorbed by the organism and produce poisoning, often of a serious nature." According to that eminent scientist "not only the rudimentary appendix and the cæcum, but the whole of the large intestine are superfluous and their removal would be attended with happy results." This idea seems to meet with approval in the estimation of Sir W. Arbuthnot Lane who says "the ideal primary operation would be the removal of the large bowel to the junction of the ileum, but against such a measure there is the very unsatisfactory state of the patients." To avoid risk, therefore, he makes an anastomosis between the small intestine and the sigmoid flexure or rectum, thus dispensing with ascending, transverse and descending colon. According to Sir Lauder Brunton this operation is not uniformly attended by satisfactory results. If the patient does not have a daily evacuation, material may slip back into the cæcum. If the condition recurs, after being, for the time, relieved by an enema, Lane removes the cæcum and ascending colon up to the flexure. "Possibly in years to come," says Sir Lauder Brunton, "the operation recommended by Metchnikoff and regarded as the ideal one by Sir W. Arbuthnot Lane may be one in common use." When men of science reach the conclusion that the all-wise Creator has made a mistake in the construction of man, I think it is time for them to examine anew their premises. In this case I believe them to be absolutely false and I would respectfully commend to these gentlemen the first requisite for a scientific student—humility—for as Lord Bacon reminds us "the Kingdom of Science found among men is like the Kingdom of God, it can be entered only in the spirit of a little child."

1. Allbutt and Rolleston's System of Medicine, Vol. III.

The Treatment of Tumors of the Bladder with High Frequency Currents.*

By THOS. V. WILLIAMSON, Genito-Urinary Surgeon to Protestant Hospital, Norfolk, Va.

The history of the development of electrotherapeutics and electro-surgery, as far as diseases of the urinary viscus are concerned, is unimportant until a comparatively recent date. Lately, however, the application of the high frequency currents for the destruc-

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tion of tumors of the bladder has revolutionized surgical procedure in dealing with these pathological conditions and has abolished many of the old horrors of bladder surgery. Dr. Edwin Beer, of New York, taking advantage of a recent discovery that the Oudin and D'Arsonval currents are so highly potential as to persist in water, first demonstrated the practicability of using them in the bladder distended with fluid medium; and thus enlarged the already wide field of usefulness found for the cystoscope at the present time. Other surgeons eagerly followed in his footsteps until, today, fulguration, as the term is commonly used, is the universally recognized and deservedly popular method of treating new growths in this cavity. The word fulguration is derived from the Latin *fulgur*—meaning lightning. Fulguration, in the broad sense, implies the destruction of tissue by an electric current which comes and goes like a flash of lightning.

After the surgeon has thoroughly mastered the technique of using the cystoscope, it is not difficult to handle the high frequency currents in the urinary reservoir. Keen observation and good judgment are the prime requisites in doing this work. A correct estimation of the strength of the current needed to produce the desired penetration and intelligent selection of the best site to apply it are the two points which give the Genito-urinary surgeon most concern. Dr. Bentley Squire, of New York, has devised an ingenious scheme to overcome the first of these difficulties. He subjects a piece of fresh meat to the action of the spark and is thus able to definitely estimate the exact amount of current necessary to bring about the degree of penetration wanted. The current is regulated by increasing or decreasing the length of the spark in the de Kraft's spark gap as I will show you, in the demonstration, later. In selecting the site for application, the best and quickest results are obtained by placing the electrode as close as possible to the bladder wall without causing injury to it. As we actually see through the cystoscope what we are doing, the element of guess work is entirely done away with in this stage of the operation.

Surgically speaking, neoplasms of the bladder are classified pathologically as papilloma which is benign and frank cancer which is malignant. It is of the greatest importance to the surgeon to determine in which class the tumor he is dealing with belongs, as the treatment given to the benign type is essentially different from that applied to the malignant form. We may safely assume that all single papilloma are benign, while on the other hand multiple

forms should be regarded with the gravest suspicion as they are often malignant. Multiple papilloma are frequently too near the border line to be recognized as belonging to one class or the other with the naked eye. In these cases, recourse to the pathologist must be taken to clear the diagnosis. The specimen is obtained from a slough after the first sitting for fulguration.

To destroy benign papilloma of either the single or multiple type, the unipolar or Oudin current is used. An ordinary catheterizing cystoscope carrying a well insulated electrode, is introduced into the bladder and the viscus distended with a fluid medium. The electrode is advanced, under the guidance of the eye, and the uninsulated tip is pushed into the tumor as near its base as possible. The current is turned on and allowed to act from ten to thirty seconds. As soon as the contact is made, a bluish white light flashes out, ebullition of gas bubbles due to electrolysis of the water takes place and the tissues around the electrode are seen to become pale and blanch. At the point of contact of the electrode, a white eschar is formed which undergoes a necrotic process and in the course of a few days is passed out in the urinary stream as a slough.

Various parts of the growth are attacked during each application and if the papilloma is small it can be destroyed at one sitting. Fulguration should be repeated in four to ten days until the entire mass is eradicated. After the growth has been obliterated, careful cystoscopic examination should be made from time to time to guard against recurrence.

Unless the current is carried too near the bladder wall, the patient experiences but little pain in fulguration of benign tumors. Although plentifully supplied with blood vessels, these growths are generally lacking in delicate nervous elements. This fact is of infinite benefit to the patient, as it does away with the necessity of general anesthesia in most cases.

In treating primary carcinomatous or malignant conditions of the bladder, the bipolar or D'Arsonval current is the one of choice. Unfortunately, it is impossible, with the vast majority of patients, to successfully approach the cancerous tissues and adequately treat them through the operating cystoscope. Suprapubic cystotomy must, therefore, be done. The carcinoma is first thoroughly destroyed by active cauterization and then the tissues around it are baked with the D'Arsonval current so that all deep lying cancer cells are killed. Fulguration by itself should never be practiced in treating primary carcinoma because the good effects brought

about by it are only temporary. Recurrence will almost certainly appear sooner or later and the operation has been for nothing. The impregnated tissues should always be removed by the actual cautery first, and then fulguration, wisely administered around the area where the mass once lived, tends to prevent spread and recurrence of the trouble. Of course, the surgeon can never be certain that all cancer cells are dead and he must keep methodical watch with the cystoscope to see that they do not spring into life again.

This method of dealing with these conditions has produced far better and more lasting benefit than the trans-peritoneal approach to the bladder with resection of the involved portion. The mortality rate is low and, all things considered, the end results are immensely gratifying to both the patient and surgeon.

So much for primary malignancy of the bladder. But how are we to deal with secondary manifestations there? As a rule, we are not called upon to alleviate the urinary distress until metastasis has become general throughout the system. Attempt at radical extirpation would be criminal and before the era of the high frequency currents we were compelled to seek recourse in suprapubic cystostomy for drainage. Fulguration, practiced through the cystoscope is the answer to this question. This means of checking the inroads by invasion of secondary carcinoma now saves numerous patients the disagreeable and painful necessity of suprapubic cystostomy. It enables many afflicted ones to live their last days in comparative comfort and thus confers one of its greatest blessings on suffering mankind.

To illustrate the last point taken up, let me cite the following case:

On August 1st, 1913, Dr. E. Field, of Norfolk, referred a British sailor to me for cystoscopic examination. The patient was 49 years old and lived on the water since boyhood.

Family history unimportant.

Past history revealed the following story:

Twelve years ago, patient began to complain of gastric disturbances and indigestion. Felt bad generally and lost much weight. Two years following the appearance of these symptoms, the urine started to burn and a considerable quantity of blood was passed at each act of micturition. No cause for the urinary manifestations was found and the patient became better in a few months.

Present History.—For several years, he has been voiding bloody urine and the process of urination has been exceedingly painful and very difficult. Was cystoscoped several times, both in London and New

York, but no pathological lesion was found. Loss of weight has continued, bowels are sluggish and suffers constantly with jaundice.

Personal examination showed the patient to be thin, cachectic and jaundiced.

The urine contained a quantity of bright red blood showing that the hemorrhage was, in all probability, taking place while the urine was passing. Prostate, seminal vesicles and urethra normal.

Cystoscopic examination disclosed a trabeculated bladder. Ureteral orifices normal. Situated between the left ureteral ostium and the internal vesical sphincter, there was a multiple papilloma, which was clean, unulcerated, and was attached to the bladder by a wide thick base. This growth was so closely related to the vesicle sphincter that it was impossible to view all of it through the instrument.

Diagnosis of papillomatous carcinoma secondary to carcinoma of the liver was made and fulguration was decided upon.

The Oudin current was applied through the cystoscope for ten seconds each to three different spots at the first sitting. In the course of the next few days a large quantity of sloughing detritus came away in the urine. No increase in bladder pain was noticed. August 11th fulguration was again done and the urinary distress was somewhat lessened soon thereafter. On August 20th the current was again applied and a big slough was the result. These operations were rather close together, but as the patient felt no ill effects from them fulguration was repeated on September 3rd. At this time the mass had almost disappeared and the patient was living in comfort for the first time in years. He left for his home in England about the middle of September and I have not seen him since.

The results in this case speak for themselves and, in my opinion, no higher recommendation could possibly be given for the use of the high frequency currents in this class of work.

411 Taylor Bldg.

Acute Colitis in Children.

Hutinel and Nobecourt (*Progres med.*) made a communication on this subject at the Thirteenth Congres francais de medecine. The best classification is based on the character of the evacuations. Acute mucous colitis has three forms: the benign, which lasts only a few days and is characterized by mild symptoms; the grave, corresponding to the follicular enteritis of Widerhofer, or the dysenteric of Marfan, lasting five or six days, and marked by vomiting, complete anorexia, high fever,

anxious expression, dry skin, muco-purulent and bloody stools, and often ending fatally with dyspnoea, convulsions, erythema, etc. Localized forms are more common in adults, typhilitis and sigmoiditis, from which the differential diagnosis of appendicitis is very difficult, and may be grafted on to congenital affections of the colon such as Hirschsprung's disease. Colitis may be at the onset dysenteric; it resembles dysentery, and is associated with great pain, purging, tenesmus, and stools like frogspawn, or dark brown and muco-purulent. Recovery is frequent. The third principal class of colitis is represented by dry cholera, often caused by excess of milk diet. The symptoms comprise green vomit and stools, marked change in the facies, cold extremities, oliguria, slow irregular pulse and nervous phenomena. The secondary manifestations of colitis are numerous, e.g., stomatitis, tonsillitis, intestinal hæmorrhage and appendicitis, the existence of which is often not noticed, and especially periodic acetonaemic vomiting, whose origin is freely intestinal. Cystitis is common in girls and pyelitis possible; jaundice may occur. Bronchopneumonia occurs less frequently than in other infantile affections. The nervous system often suffers, as is shown by convulsions, meningeal symptoms and even tetany and a slight spinal lymphocytosis. Neuritis of the pneumogastric has been noticed by Renon. Erythematous of a polymorphous type are common and may be associated with purpura. Lastly, there may be œdemas due to retention of chlorides. The aetiology of primary colitis in children consists of three factors: faulty diet, especially too much cow's milk or eggs, affections of the nasopharynx, and contagion. Age heredity, previous constipation also take part. Secondary colitis is due to malformations, intestinal parasites, general infectious diseases, measles, scarlatina, typhoid and even meningitis. Treatment consists in lavage with hyposulphite 50 per cent., peroxide of hydrogen 50 per cent., or nitrate of silver solution 0.20 per cent. Ipecacuanha and guarana are often efficacious. Calomel, except in divided doses of 1 to 5 cgrm., may be dangerous, and the authors prefer as a purgative either sulphate of magnesia or castor oil. The different glands may be stimulated by multiple extracts, pancreatic, hepatic, or suprarenal. In severe forms camphorated oil and serum with caffeine are indicated, with hot baths or compresses.—British Journal of Children's Diseases.

Intravenous Injections of Ergotin in the Treatment of Hemoptysis.

Garmagnano first determines the patient's

blood pressure. If this is less than 110 he gives an intravenous injection of 0.50 gram of ergotin dissolved in 1 c.c. of distilled water. If the blood pressure is higher than 110 there is injected in addition 0.001 gram of morphine hydrochloride. A few minutes after the administration the cough and hemoptysis cease.—La Riforma Medica.

Fibromatosis of the Stomach.—Thomson and Graham (Edinburgh Med. Journ.) criticise other views that have been put forward and give their own conclusions.

The absence of characteristic granulation tissue and of endarteritis and a negative Wassermann reaction put out of court a syphilitic pathogenesis, though of course the possibility of a gumma of the pylorus causing stenosis is admitted.

A specimen showing cancer and tuberculosis was examined and led them to the conclusion that fibromatosis was neither directly tuberculous, nor yet due to the attenuated form of tubercular infection described by Poncet. They are also enabled to affirm most positively that fibromatosis may occur without the presence of cancer. Fibromatosis is an innocent affection of the stomach and is invariably associated with an ulcer.

When fibromatosis is associated with a deep punched-out ulcer, the mucosa over the surrounding fibromatosis may be normal. This appears to indicate that submucous fibromatosis is not the cause of the overlying ulceration.

The changes in the mucosa are primary and the submucous fibromatosis is secondary. The diffusion of the fibromatosis from the submucosa into the mucosal coat, especially along the lesser curvature, and its sudden arrest at the pyloric ring, suggest that some irritant toxin is being absorbed from the ulcer and in its passage along the lymphatics sets up this marked reaction.

Since ulcer precedes fibromatosis it is fairly common to find cancer as well. Attention is directed to the interesting observation that fibromatosis of the duodenum has not been recorded. The duodenum, as we know, is practically immune to cancer, in spite of the great frequency of ulceration.

In fibromatosis there is often a palpable tumor, and usually no free hydrochloric acid, so the diagnosis of cancer is confidently assumed. Owing to the difficulty of naked eye differentiation from cancer and the total unreliability of "while-you-wait histology," the authors advise resection of the affected parts.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

"DON'T CROWD—JUST PUSH."

Do you remember how as a "kid" the boys used to say "Don't crowd—just push?" You, perhaps, have forgotten it, but recall it for a moment.

"There is a distinction with a marked difference" between the words crowd and push. To crowd means to surround in a riotous manner and force in no definite direction; to push means to force in a given direction with the force applied so that a definite object is attained.

From an anesthetic standpoint the terms are used in almost the same manner. Crowding means to force the anesthetic upon the patient with but one object in view, namely, to eliminate consciousness and so produce narcosis, no regard being given to complications that may arise. Pushing the anesthetic means increasing the amount of anesthetic given but doing so with discretion.

How many times have we seen the ether bottle tilted and a great quantity of the anesthetic dumped on the mask in an effort to produce narcosis quickly? How many times have we had to jump in and work like Trojans to save the life of the patient?

The desire to anesthetize quickly is directly responsible for many of the complications of narcosis, among them being the excitement incidental to so many cases in the preanesthetic period, the disturbances of secretion and the nausea during and after anesthesia.

A gentleman recently reported a number of cases from his practice showing the results of the various methods of producing and maintaining anesthesia and the effect upon nausea. He found that nausea was present in an average of 76% of his ether cases and in 59% of his gas-oxygen and gas oxygen ether cases. He did not realize that these very statements condemned his general method of procedure.

This one great deplorable feature of anesthesia can be avoided, not completely, but to a considerable extent by not crowding the anesthetic but by pushing it. In other words, by gradually increasing the dosage, a very large proportion of trouble from nausea can be eliminated. There is no doubt that the administration of large quantities of the anesthetic in the beginning is responsible for the coughing, the struggles

and the mental fear which occurs during the conscious and the subconscious periods of the second stage. This is true in the use of all anesthetics and in all anesthetics. All of this can be avoided unless the operative manipulation produces a shock or there is an irritation of the splanchnics.

More gentleness should be used, more cognizance should be taken of the mental attitude of the patient, his confidence should be gained by preliminary talks (if possible) and he should be brought gradually to the second stage. A little stunt in use for several years—ask your patient to blow the vapor away from the mask. It has been found that these suggestions tend to a quiet and quicker induction and to a more even and uneventful maintenance of anesthesia as well as recovery.

So, again, we say, "Don't crowd—just push."

The subject of insanity within recent years has been given more publicity than in former years. This has been due to the apparent increase of insane and mental defectives and to the great financial burdens of the States and counties for their respective care. The actual increase, however, cannot be definitely determined, as our yearly census only states the number of cases admitted but does not give the number of those who are suffering from second or third attacks.

Publicity in the sense of enlightening the public as to what insanity really is and our present-day method of treatment as well as to the prevention is not amiss. A sentiment exists even now among the laity that to be insane is a disgrace; that a patient suffering from insanity is a howling maniac to be guarded and watched as though he were a criminal. They are not familiar with the disease and its present-day treatment and they do not know that many forms of the disease are not hereditary in the truest sense.

Our present knowledge of the etiology of the disease is that alcohol, syphilis and heredity are the potent factors. The public should be judiciously instructed relative to alcoholism and syphilis; the question of heredity, however, is a subject which should be handled guardedly. Segregation and sterilization of the feeble-minded and the prevention of the marrying of chronic alcoholics and epileptics should be pushed to the utmost. The prevention of insanity in those individuals who already have in their make up the abnormal brain cell which will some day make manifest its component parts (although the individuals are apparently normal at the present time) is a hard problem to handle.

This is due to the fact that alienists do not know heredity. For example: In a given family where there is the history of an uncle or an aunt being insane, we cannot say whether any particular individual of that family will go insane, or which particular one the disease might happen to strike. The public should be acquainted with the best methods of care of the mentally defective.

The detailed reports of the various states would lead us to believe that State care is superior to county care. Well established State boards advocate psychopathic hospitals, hospitals for the insane, separate colonies for the constitutional inferior, separate colonies for the epileptics, separate institutions for the inebriates, and the removal of all insane from almshouses and jails. Such a working scheme seems logical and is apparently the last word at the present time in the treatment of the mentally diseased.

A series of articles relative to prevention, the actual treatment and the prognosis of insanity could hardly be amiss.

PREVENTION OF INSANITY.

Heredity, alcoholism, and syphilis being the potent factors in the course of insanity, our preventive methods would be the overcoming of these three great causes.

Heredity—Undoubtedly, heredity is the greatest factor in this list of causes. Some writers estimate that eighty per cent. of all the insane give a history of heredity; of course this includes the great groups of feeble-minded and epileptics. At the same time, however, we must bear in mind that a great per cent. of these cases are not epileptics, neither are they feeble minded individuals. As soon as we learn heredity and are able to point out that the first, second, or third child in the descending generation of a family, in which there is insanity, will invariably (though apparently normal) go insane, we can guard that particular individual's life, so as to prevent his or her mental breakdown.

Idiots, imbeciles, feeble-minded, epileptics, and chronic alcoholics should either be committed for life to their respective institutions or sterilized. One or the other method of procedure should without question be done; subjecting the individual to both methods of treatment is wholly unnecessary.

Sterilization for a great group of these cases, who are self-supporting, would relieve the state of unnecessary burdens. On the other hand, their freedom with the realization of the fact that they are procreatively inert, would no doubt make them the subject of designing persons, and would

have a tendency to lower social laws, and to spread venereal diseases. Their lack of mentality would necessitate an occupation, something second to slavery if they were not fortunate in having a lenient employer. Therefore they seem a State care; if segregated, and under the proper supervision, they could be properly cared for, given a moderate amount of pleasure, and their earnings revert to the State in payment for their support. Their freedom is restricted not by man, but by fate, and there is no better guardian than the State.

Alcoholism.—Next to heredity alcohol most likely causes the largest group of cases. Alcoholism is a social disease well rooted, and men have imbibed since days immemorial. To abolish it seems impossible; the imbibor calls for something,—if not alcohol, he will find its equivalent in something else. This leads us to the question of alcohol being a disease as well as to the question of mental derangement in those individuals who drink alcohol prior to their development of those symptoms known as alcoholic insanity. In the great group of cases of chronic alcoholics, whose ancestors and descendants were alcoholics, it seems a disease and a transmissible mental affliction. Many of the cases admitted to the institution and diagnosed as alcoholics are manic depressive cases, upon which is superimposed alcoholism. These individuals should not be permitted to marry; and in justice to themselves should not be committed to hospitals for the insane. They should be sterilized or committed to institutions for the inebriates.

Syphilis.—It is impossible to estimate at the present time the number of cases due to syphilis. Authorities disagree. We know, however, that one great psychosis—namely, paresis—is in a large part due to syphilis. It is impossible to estimate what per cent. of syphilitics develop paresis. It is impossible to prevent a syphilitic from developing paresis in the sense of medication; we can, however, so regulate his life relative to sexual excess, over-work, mental strain, alcohol, etc., as to prevent a mental breakdown. The great prevention then is the prevention of syphilis and the control of the syphilitic.

It is questionable whether the making of syphilis a reporting contagious disease would be found practicable. If such a thing could be done and the marriages of syphilitics prevented, society would be rewarded for its labors. If syphilis were made known to the public, its ravages not only to the person afflicted, but to his or her progenitors, a public offer were made to sterilize these infected individuals—the same to be done with a great deal of privacy

—and the ravages of the disease made horribly clear to the sufferer, no doubt many would clamor for the operation. This would protect society from any descendants of an infected family; but some definite means should certainly be instituted to protect society from innocent infection. This question also involves legalizing prostitution on a strict medical inspection, or the abolishing of all houses of ill fame. These questions cannot be discussed in this editorial.

GENERAL CARE OF THE INSANE.

In speaking of the general care of the insane, it is not necessary to say that all cases should be removed from almshouses and jails and placed in regular hospitals for the insane. It is also unnecessary to add that the feeble-minded and alcoholics should be separated from the insane and cared for by the State. State care seems to offer a better method of care than county care or county and State care combined.

The general care of the insane may be discussed under two broad headings—home care and institutional care. The indications for home care are dementia præcox in its early stages, mild forms of the manic depressive group, and harmless senile dementments. The contra-indications for home care are suicidal and homicidal cases, paretics, paranoiacs, violent cases, terminal dementments, feeble-minded insane and the epileptic insane. The requisites for home care are, a skilled physician, well versed in the subject of psychiatry, a graduate nurse of a hospital for the insane, proper home environments, carefully regulated and systematized employment and recreation, a moderate amount of privacy, a moderate amount of exercise, considerable regulation of hours of rest, and restriction of travel.

Institutional treatment may be divided into private and State or county institutional treatment. From a curative, as well as from a financial standpoint of the relatives, those cases in which private hospital care is indicated are, mild confusions, mild manic depressives, exhaustion cases and those cases belonging to the minor psychoses. These cases offer a better prognosis as to cure and run a comparatively short course. This particular class of cases offers the best argument for psychopathic hospitals, under State supervision, for the care and treatment of the indigent insane, as many of these cases, under short periods of treatment, would get well and would never bear the stigma of having been committed to a hospital for the insane, and would not necessarily associate with the raving maniacs, hopeless cripples, the dement, and so on. Those cases which require custodial care in State hospitals are,

suicides, homicides, advanced præcox cases, paranoiacs, paretics, terminal dementments, the epileptic and feeble-minded insane. Most State institutions have their acute receiving section for excited cases, with their hydrotherapeutic plant in close communication with same. They have a receiving section for the mildly depressed cases, as well as a receiving section for the infirm and sick cases, in which are the usual surgical dressing rooms and necessary equipment for the care of the sick. A further classification is made pending the patients' recovery or the chronicity of the attack. The recoverable cases usually pass to the quiet sections, then to the convalescing buildings or farm colonies. Chronic cases are distributed to the refractory sections, nuclear sections, mildly chronic sections, epileptic sections and farm groups.

The greatest principles involved in the treatment of the insane are, the rest and hydrotherapeutic treatment for the manic depressive group, employment and labor in its various forms, arts and crafts, shop, etc., for its mild chronic and convalescent group. Institutions conducted along these lines seem to offer the best advantages from the standpoint of care, economy and the ultimate recovery of the patient.

Editorial News Items.

President James M. Parrott of the State Medical Society of North Carolina called a meeting of the Councillors in Greensboro November 19, and invited the officials of the State Board of Health to meet with them, with a view to studying methods and devising plans to render more efficient the work of the county medical societies and to further conserve in every possible way the public health interests of the State.

Dr. E. Dixon Carroll, of Raleigh, delivered an able address before the Fayetteville, N. C., Civic League and citizens on November 18, on the "Civic Duties of Good Citizens in Carolina Towns."

The Laurens County Hospital, of Laurens, S. C., which has been doing excellent work as a general hospital and training school for nurses during the past three years, will ask the legislature to change its name to the Julia Irby Sanitarium. Miss Irby continues the business manager and the staff as formerly.

According to the press news of the country "differences of opinion between Dr. Karl Von Ruck, of Asheville, and the investigators sent from the United States,

Public Health Service, under Congressional orders, from Washington, D. C., to investigate and report to the government on the value of the tuberculosis vaccine being manufactured and distributed by the former, has resulted in the withdrawal of the government representatives from their study of the matter at Asheville and their return to Washington, D. C. The government experts are said to have insisted on a complete knowledge of the methods of preparation of Dr. Von Ruck's anti-tubercle vaccine and its submission to tests of their own suggesting, while Dr. Von Ruck contended that his own methods should be followed absolutely and declined to allow the experts certain privileges asked.

It is said that Surgeons Anderson and Stimson will continue the investigations in the Washington laboratories, and later make their official report to the United States authorities. Both profession and public will await the government report with interest.

The Second Detachment of the Hospital Corps, North Carolina National Guard, is to be transferred from Kinston to New Berne at once. During the two years of its being stationed in Kinston it has been without command of a medical officer. When transferred to New Berne it will be under the command of Dr. Raymond Pollock of that city, who is a First Lieutenant in the service.

Dr. J. W. McGee, of Raleigh, who has been confined to his home with painful illness for several weeks past, has recovered and resumed practice.

Work is rapidly progressing on the erection at Raleigh of the buildings for the Wake County Hospital authorized by the last Legislature.

Subscriptions have been taken and plans are being arranged for the building of a general hospital at Elizabeth City to be owned jointly by the physicians and business men of that city.

Dr. N. A. Thompson, of Lumberton, has returned after spending some time in post graduate work in New York City.

The Board of Aldermen, of Concord, N. C., at a meeting last week, rescinded the license of every druggist in the city to sell alcoholic liquors on physicians' prescriptions.

The County Commissioners of Nash county last week decided to have a whole

time County Health Officer who will be elected at the December meeting of the Board. This will make 12 North Carolina counties that begin 1914 with whole time health officers.

Dr. W. E. Coltrane, recently of Lucama, has located at Dunn, N. C., for the practice of his profession.

The North Carolina State Board of Health announces that "Vaccination against typhoid fever has successfully passed all the tests of science and practice and has won as prominent a place among sanitarians as has vaccination against smallpox," and having established a plant for the production of anti-typhoid vaccine under authority of the last regular session of the State Legislature, invites those physicians who wish the vaccine to apply for it, as it will be furnished without cost to those applying.

Dr. and Mrs. W. M. Reedy celebrated their Silver Anniversary at their attractive home in Clio, S. C., on November 27th.

Passed Assistant Surgeon A. D. Foster, United States Public Health Service, has been ordered by the department at Washington to investigate the prevalence of trachoma in Wilkes county and adjacent territory in the Western North Carolina mountain district.

The Corcoran Hotel property in Durham, N. C., has been leased by the incorporators of the Mercy Hospital and announcement has been made of the opening of the Mercy Hospital January 1st.

Dr. P. B. Orr has been elected Health Officer of the recently incorporated city of West Asheville, N. C.

The session of the Fourth District Medical Association of South Carolina was held in Anderson, S. C., November 23 with 76 physicians in attendance. A number of instructive papers were presented. In a paper presented by Dr. J. L. Jeffries, of Spartanburg, it was announced that unless patients were able to pay more for treatment at the Pellagra Hospital in that city or the General Assembly made a State appropriation therefor, many of the patients of the institution would be obliged to return to their homes. Seneca, S. C., was voted the next session. Officers elected: President, Dr. J. O. Sanders, Anderson; Vice-President, Dr. J. L. Bolt, Pickens; Secretary, Dr. A. D. Cudd, Spartanburg.

The Red Cross Society of Wilmington announces the completion of the buildings and the opening December 1st of the Sanitarium for Tuberculosis, located two miles below the city, with accommodations for both white and colored patients to the number of forty by utilizing the institution's full capacity.

On Thanksgiving Day the corner stone of the Wilson Hospital and Tubercular Home for Negroes was laid with appropriate ceremonies. Well known leaders of the negro race were present from all over the State, and the principal address was made by Dr. W. S. Rankin, Secretary of the State Board of Health.

The five-year-old daughter of Dr. D. S. Currie, Parkton, N. C., was criminally assaulted by a young negro man Nov. 24th. Much indignation was expressed in the community, and a few hours afterward, when the negro was captured, to avert the possible danger of lynching, the prisoner was by order of Gov. Craig spirited away by the sheriff and safely lodged in the State penitentiary at Raleigh where he will await his trial.

Charles T. Harper, M.D., of Harper's Sanitarium, has been appointed assistant local surgeon for S. A. L. Railroad at Wilmington, N. C.

Miss Bert Cochran and Dr. P. J. Chester were married on Tuesday evening, November 25th. Mrs. Chester is the daughter of Mr. and Mrs. W. O. Cochran, of Charlotte, N. C. Dr. Chester is one of Mooresville's young physicians and a graduate of the North Carolina Medical College. Dr. and Mrs. Chester will spend some time in New York.

The Seventh District Medical Society of North Carolina met in Lincolnton, N. C., December 1-2. The following program was practically carried out. Many of the papers were of unusual value and all of them instructive. The clinical exhibits were very interesting.

During the annual session of the North Carolina Teacher's Assembly in Raleigh, N. C., November 26-29 Dr. Albert Anderson, Supt. State Hospital for Insane, held a Mental Hygiene Exhibit and Conference for the benefit of the teachers. The State Board of Health also had an exhibit.

MONDAY, 7:30 O'CLOCK.

Opening prayer.

Address of welcome in behalf of Lincoln-

ton—Capt. C. E. Childs, mayor of Lincoln.

Address of welcome in behalf of Lincoln County Medical Society—Dr. H. M. Abernethy, Denver.

Response to address of welcome—Dr. Oren Moore, Charlotte.

"Hygiene"—Dr. J. E. Kerr, Lilesville.

"Surgical Europe and Great Britain"—Dr. C. M. Strong, Charlotte.

"A Full Stomach the Mother of all Ills"—Dr. H. D. Stewart, Monroe.

"X-Ray Demonstration of Fibroid Phthisis"—Dr. W. B. Witherbee, Charlotte.

"Illustration of Pathological Conditions of the Kidneys and Ureters"—Dr. J. W. Squires, Charlotte.

Informal smoker.

TUESDAY, 9 O'CLOCK.

"The Large Bowel: Its Function with Reference to Intoxication"—Dr. J. Rush Shull, Cliffside.

"Emetin Hydrochloride in Treatment of Amoebic Dysentery"—Dr. W. O. Nisbet, Charlotte.

"Functional Diarrhea"—Dr. William Allan, Charlotte.

"Bacterial Vaccine Therapy"—Dr. Bess Puett, Dallas.

"Treatment of Pneumonia"—Dr. R. Armfield, Marshville.

"A Peculiar Case"—Dr. T. M. McCoy, Mount Holly.

"What is the Dose of Urotropin? Test for the Same"—Dr. F. D. Austin, Charlotte.

"Present Status of Salvarsan in Treatment"—Dr. A. J. Crowell, Charlotte.

"A Partial Review of the Advancement in Clinical Diagnosis"—Dr. R. M. Reid, Gastonia.

"Diagnosis of Duodenal Ulcer"—Drs. Henry Norris and H. M. Biggs, Rutherfordton.

Adjournment to moving picture show.

"Physiological and Bacteriological Demonstration with Moving Pictures"—Dr. J. P. Munroe, Charlotte.

TUESDAY AFTERNOON, 2:30.

Announcement of officers for next year and other business.

"Intubation in Membranous Croup"—Dr. A. S. Wilkins, Dallas.

"Two Cases of Injury of the Eye"—Dr. J. H. Tucker, Charlotte.

"Types of Goitre and Their Corresponding Stricture; Illustrative Cases"—Dr. A. G. Brenizer, Charlotte.

"Three Months Colic Babies in Relation to Retrocecal Appendix; Twelve Cases—A Failure of the Colon to Rotate; One Case"—Dr. Harland Shoemaker, Shelby.

"The Necessity of More Accurate Diag-

nosis in Surgical Cases"—Dr. R. L. Gibbon, Charlotte.

"Surgical Anæsthetic"—Dr. L. A. Crowell, Shelby.

"Posture of the Body and its Relation to Disease of the Abdominal Viscera"—Dr. A. Wiley Moore, Charlotte.

"Pituitria in Obstetrics"—Dr. E. B. Lattimore, Shelby.

"Spasmodic Contraction of the Uterus in Labor"—Dr. S. A. Stevens, Monroe.

"Splentitis with Surgical Relations"—Dr. J. W. Wallace Concord.

American College of Surgeons.

American College of Surgeons formally opened in Chicago, Ill., Nov. 13, 1913.

Ceremonies of the most impressive order marked the induction of 1,050 of the leading surgeons of the North American Continent as Fellows of the American College of Surgeons in the Congress Hotel.

Clad in robes of black with crimson facings they marched into the gold room of the hotel, where degrees were conferred upon them. The ceremony was held in connection with the Clinical Congress of Surgeons of North America.

Names of the surgeons who were made members of the new order were read by the secretary of the college, Dr. Franklin Martin. At the close of the reading a hush fell upon the audience as Dr. J. M. T. Finney, president, said in solemn tones:

"By virtue of the power vested in me I hereby declare those whose names have here been read this evening to be Fellows in the American College of Surgery."

ENGLAND SENT GREETING.

Sir Rickman Godlee, president of the Royal College of Surgeons of England, read a message to the members of the College from the Royal College.

In the message felicitations were conveyed to the Americans and hopes expressed that this College would grow and prosper and that by its influence the ideals and standards of surgery in America would be advanced and maintained on a high plane.

Following the reading of the message of appreciation and desire from the Royal College, Sir Rickman gave an address in which he outlined the history of the growth of surgery in the British empire.

Honorary degrees were conferred upon Sir Rickman Godlee, Dr. W. W. Keen, American Professor of Surgery in Jefferson Medical College of Philadelphia, Dr. William Stuart Halstead, Emeritus Professor of Surgery of Johns Hopkins University, and Dr. John Collins Warren, Emeritus Professor of Surgery at Harvard University.

In the presidential address Dr. Finney declared the College would have a beneficial effect upon the surgical profession in the United States and Canada.

MUST RAISE STANDARDS.

"There lies a responsibility with every member of this College," said Dr. Finney, "to assist in raising the ideals of the profession and erase the blots which now disfigure the escutcheon of the business of surgery. One of the most important functions of the College is to wage a relentless warfare against the evil practices with which the profession is tainted.

"Chief among the evils which beset the practice of surgery is the pernicious practice of fee-splitting. This organization is formed for the express purpose of doing away with such evils, and to raise the standards of the profession as to ethics and morality.

"No doctor should undertake to do professional work without a special preparation. Special training is needed for the man who undertakes to do surgical work. It is to be hoped that the day is not far distant when the practice of surgery will be limited to surgeons and will not be indulged in by those who are simply physicians and nothing more."

The organization is patterned after the Royal College of Surgeons of England, and each member subscribed to the following pledge before being admitted as a member and presented with his certificate:

"Recognizing that the American College of Surgeons seeks to exemplify, enforce, and develop the highest traditions of our calling, I hereby pledge myself, as a condition of Fellowship in the College, to live in strict accordance with all of its principles and declarations.

"In particular I pledge myself to pursue the practice of surgery with thorough self-restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by study of surgical literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interests of my professional brothers and seek their counsel when in doubt of my own judgment; to render willing help to my colleagues and to give freely my services to the needy.

"Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness; to shun unwarranted publicity, dishonest money seeking and commercialism as disgraceful to our profession; to refuse utterly all secret money trades with consultants and practitioners; to teach the patient his

financial duty to the physician, and to urge the practitioner to obtain his reward from the patient openly; to make fees commensurate with the services rendered and with the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation.

"Finally, I pledge myself to co-operate in advancing and extending by every lawful means within my power the influence of the American College of Surgeons."

FOUNDERS AND GOVERNORS FROM VIRGINIA AND NORTH CAROLINA.

VIRGINIA:

Lewis C. Boshier, Richmond.
J. Shelton Horsley, Richmond.
Geo. Ben Johnston, Richmond.
Southgate Leigh, Norfolk.
Stuart McGuire, Richmond.
Robt. Lewis Rhodes, Roanoke.
Hugh Henry Trout, Roanoke.
Stephen H. Watts, Charlottesville.
A. Murat Willis, Richmond.

NORTH CAROLINA.

John Wesley Long, Greensboro.
Hubert Ashley Royster, Raleigh.

FELLOWS FROM VIRGINIA AND NORTH CAROLINA.

VIRGINIA.

Robert C. Bryan, Richmond.
Joseph A. Gale, Roanoke.
Lomax Gwathmey, Norfolk.
George Tucker Harrison, Charlottesville.
James S. Irvin, Danville.
B. R. Kennon, Norfolk.
William P. Matthews, Richmond.
Levi Old, Norfolk.
Robert Lee Payne, Norfolk.
Charles Russell Robins, Richmond.

NORTH CAROLINA.

K. P. Battle, Jr., Raleigh.
Henry Norris, Rutherfordton.

is confronted with a bewildering mass of scientific information, the main facts of which he is expected to assimilate in four years. Even after he enters professional life he must still continue his studies in order to keep himself abreast with modern progress. To be able to grasp intelligently the new advances as they come and make practical application of them, he should have the fundamentals of the subject clearly and prominently in mind. To this end the *Epitome* is admirably suited; it is not a means of escape from wider or deeper reading, but an incentive and trustworthy guide to it. Stenhouse's *Epitome of Pathology* is unusual in the excellence of its text, illustrations and arrangement, and the questions at the end of each chapter will be found a strong mental stimulus, for they bring out in bold relief the important points throughout the volume.

The Friendly Enemy. By T. P. Cameron Wilson. G. P. Putnam's Sons, New York; London, The Knickerbocker Press. 1913.

This dramatic story of slum life is written with a rare consciousness of social wrong and an equally keen realization of the herculean difficulties in the way of its righting. It presents the inarticulate groping after better things and the active rebellion against things as they are. It is full of thought and penetration, vividly written, and possesses a carrying power that would move apathy itself. Price, \$1.25.

Diseases of the Skin. By A. H. Ohmann-Dumesnil, A.M., M.E., M.D., Ph.D., etc. Formerly Professor of Dermatology and Syphilology in the St. Louis College for Medical Practitioners; the St. Louis College of Physicians and Surgeons, etc. Third edition, thoroughly revised and enlarged. 140 original illustrations. St. Louis: C. V. Mosby Medical Book Publishing Company, 1913.

This volume is one that will serve as a practical guide to an easy recognition of skin diseases, as well as to their successful treatment. The remedies recommended are such as may be found in every practitioner's armamentarium medicinarum. It is not an elaborate work but one that furnishes in a clear, concise manner, just that information which is most desired by medical students and general practitioners. Very few exotic cutaneous affections have been taken into consideration but rather the more common dermatoses of daily occurrence which are most frequently observed.

This volume contains 606 pages of text and 140 excellent illustrations. It is beautifully bound and well indexed.

BOOK NOTICES.

Pathology, General and Special. A manual for Students and Practitioners. By John Stenhouse, M.A., B.Sc. (Edin.) M.B. (Tor.), formerly demonstrator of Pathology, University of Toronto, Toronto, Canada. Second edition, revised and enlarged; including selected list of State Board Examination Questions. 12mo, 278 pages, illustrated. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The medical student of today, from the time he enters college until he graduates,

The Bugles of Gettysburg. By LaSalle Corbell Pickett, (Mrs. General George E. Pickett), author of "Pickett and His Men," "Literary Hearststones of Dixie," "In De Miz Series," etc. Chicago: F. G. Browne & Company. 1913.

This romance is written to commemorate the fiftieth anniversary of Gettysburg. Coming from the pen of the widow of the hero of that terrible conflict, it has a peculiar significance. Mrs. Pickett says of the story: "I have put my whole soul into this work. It is the song of the dying swan. I have been living and breathing the atmosphere of it all, reading old letters written in the camp and on the march, before and after the battle. It is all true." The book is written in a spirit which will carry it to the hearts of all—North and South. Price \$1.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume VII. Obstetrics, edited by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School. With the collaboration of Herbert M. Stowe, M.D. Series 1913. Chicago: The Year Book Publishers, 327 S. LaSalle Street.

This is the seventh volume of the series 1913. These volumes are issued at about monthly intervals and cover the entire field of medicine and surgery. Each volume is complete for the year prior to its publication on the subject of which it treats. The series is published primarily for the general practitioner but the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

Price of this volume \$1.35. Price of series of ten volumes \$10.00.

Wayside Experiences. A collection of plain tales as heard along the road. By C. Elton Blanchard, M.D., author of "The Letters of Dr. Betterman," "Medical Dollars and Sense," "The Nut Cracker and other Human Ape Fables," etc., etc. Physicians Drug News Company, Publishers, Newark, New Jersey.

The ancient and pseudo-respectable prudery is giving place to an earnest and intelligent desire to know more of the physical meaning of life. For some time past teachers and preachers have been busy with the fine points of moral and ethics but the terrible scourge of venereal disease has been stealing into our homes and destroying innocent victims by thousands.

Fiction writers have been allowed all

manner of freedom in dealing with suggestive situations but any fair and truthful exposition of real dangers, even though presented in proper, though plain language, has been tabooed. The cry of the child until recently has not been heard—the cry that demanded the right to be well born, of clean and healthy parents; the call of the unborn to be given a fair chance. All this has been ignored until recently.

Now a new era is dawning and we see the necessity of teaching these things in our schools, in our fiction and in other literature. The stories given in this book are exactly what is needed along this line. They bring home very clearly the effects of wrong living. Dr. Blanchard's book is one that we heartily recommend.

The Origin and Ideals of the Modern School.

By Francisco Ferrer. Translated by Joseph McCabe. G. P. Putnam's Sons, New York and London, The Knickerbocker Press. 1913.

In this work Ferrer depicts himself more truly and vividly than any friend of his has ever done. He portrays himself and describes his aims with a candour that all will appreciate. Here we have the full story of the Modern School told in simple language; here we have the whole man with all his ideals, aims, and resentments. It shows, as we well knew, and could have proved with overwhelming force at his trial had we been permitted, that he was absolutely opposed to violence ever since, in his youth, he had taken part in an abortive revolution.

This little volume is quite interesting and instructive. It is well arranged and written in clear, simple language. Price \$1.00.

A Manual of X-Ray Technic. By Arthur C. Christie, Captain, Medical Corps, U. S. Army; Instructor in Radiology and Operative Surgery, Army Medical School, Washington, D. C. With 42 illustrations. Philadelphia and London: J. P. Lippincott Company.

This is not an elaborate work on the X-Ray but a small volume giving the essentials of X-Ray diagnosis. It will be found very valuable, especially to medical officers and the large number of physicians and surgeons in private practice who find it necessary or expedient to do their own X-Ray work for diagnosis. It is always best to resort to a specialist in radiology when possible, but often in small cities and towns it is impossible, and hence necessary that every physician be familiar with the essentials of radiologic technic. For this purpose no better book can be found. Price \$2.00.

Case Histories in Pediatrics. A collection of histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the diseases of infancy and childhood, with an introductory section on the normal development and physical examination of infants and children. By John Lovett Morse, A.M., M.D., Associate Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and at the Children's Hospital, Boston. Second edition. Boston: W. M. Leonard, Publisher. 1913.

An introductory chapter has been added to the second edition which in itself is practically a small book upon Diagnosis in Children's Diseases. This chapter is entitled "The Normal Development and Physical Examination of Infants and Children" and is one of the best features of the new edition. It is fully illustrated by pictures which accurately illustrate the text.

The two hundred cases are definitely classified under captions and the book is very completely indexed and in the special manner followed in the first edition, which makes it a most valuable work of reference. Price, \$5.50.

Rue and Roses. By Angela Langer, with introduction by W. L. Courtney. New York: George H. Doran Company. Price, \$1 20.

This is a story of the unmarried woman, the story of the as yet unsatisfied dreams and longings of a girl. The heroine, Anna, is a German girl but she speaks for other girls in every country, as her story is that of every member of her sex who is forced to earn her own living. She is the emotional centre of the great Feminist movement of today. She strips every garment from her soul and lays bare each emotion that trembles in the heart of a woman. She dreams of and sighs for the Prince Charming, wondering whether he will come to her or whether she is doomed to be the eternal virgin.

The book is a very simple and interesting one, and the style of writing quite attractive.

Organic Chemistry, Including Certain Portions of Physical Chemistry for Medical, Pharmaceutical, and Biological Students, (with practical exercises). By Howard D. Haskins, A.B., M.D., Associate Professor of Organic Chemistry and Biochemistry, Medical Department, Western Reserve University. Second edition, first thousand. New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1913.

In this second edition, the entire book

has been revised which of course makes it more reliable as a reference book, and more complete from the standpoint of the student of medical sciences. As is necessary in an organic chemistry text-book for the use of medical students, all the organic compounds (of any importance) that enter into the study of physiology, bio-chemistry, and pharmacology are given.

There are 430 pages of text, several good illustrations and an excellent index. Price \$2.00.

First Book on Health. A Text-Book of Personal Hygiene for Pupils in the lower grades. By Carl Hartman, B.A., M.A., Instructor in Zoology, University of Texas, and Lewis Bradley Bibb, B.A., M.D., Attending Physician, Austin Sanitarium. With one hundred and twenty-two illustrations. Yonkers-on-Hudson, New York: World Book Company. 1913.

The motive for writing this book was to teach children that reverence for the body which will make them desirous of preserving it for usefulness and efficiency. The young pupil should be taught how to be cleanly in person and how to escape every disease that he himself has the power to avoid.

There are 155 pages of text and many illustrations which add very much to the attractiveness of the book. It is one which will appeal to children.

The Human Body and Its Enemies. A Text-Book of Physiology, Hygiene, and Sanitation. By Caro Hartman, B.A., M.A., Instructor in Zoology, University of Texas, and Lewis Bradley Bibb, B.A., M.D., Attending Physician, Austin Sanitarium. With two hundred and forty-seven illustrations. Yonkers-on-Hudson, New York: World Book Company. 1913.

There is a well-founded demand that children be taught the essentials of germ diseases and their prevention, and the authors of this volume have placed this material first, believing that its importance justifies this order of treatment.

The discussion of the anatomy of the human body has been reduced to a minimum, and the physiology has been subordinated to the principles of hygiene. Such treatment appeals to the reason of a child, for persuasion is more effective than arbitrary command. Illustrations always appeal to children and the ones contained in this volume are excellent, many of them drawn expressly for it.

Muller's Serodiagnostics Methods. Authorized translation from the third German edition. By Ross C. Whitman, B.A., M.D., Professor of Pathology, University

of Colorado School of Medicine. With seven illustrations in text. Philadelphia and London: J. B. Lippincott Company.

This volume is a collection of the more important methods of serum diagnosis and will be useful to those who dislike the labor of collecting the data scattered through literature. All theoretical considerations have been entirely omitted and the chief emphasis laid on making the description of the various methods as exact as possible. One very important feature of the book is that a complete and detailed list of the reagents and apparatus required for each text is given.

Additions to the second edition are: A chapter on the preservation of sera; the determination of meat adulteration according to the method of Uhlenhuth, Weidanz, and Wedemann; and the floccule forming reactions, especially floccule forming tests for syphilis with lecithin, and with sodium glycocholate, and Klausner's reaction; Moro's alexin test; and, finally, some modifications of the Wassermann reaction. Price \$1.50.

School Hygiene. By Fletcher B. Dresslar, Ph.D., Specialist in School Hygiene Sanitation, United States Bureau of Education. New York: The MacMillan Company. 1913.

This book sets forth in a simple and untechnical way some of the hygienic requirements of school life and suggests, whenever it is necessary, how these requirements may be put into practice. No phase of the subject is treated exhaustively but the most important topics selected and dealt with in as simple and consistent a manner as possible.

The volume is of especial value to the busy school teacher. It gives instruction, directly and indirectly, concerning matters relating to hygienic living in school and at home. Price, \$1.25.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume II. Number V. (October, 1913. Octavo of 174 pages, 52 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Published Bimonthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

Murphy's Clinics contains for this month twelve articles which are as follows:

Double Inguinal Hernia; Appendicitis—Differential Diagnosis; Osteitis Fibrosa Cysticus of the Upper End of the Femur; Cavernous Angioma of the Thigh; Sarcoma of the Thymus Gland; Infected Bursa of Olecranon—Miner's Elbow; Healed Duodenal Ulcer; Ankylosis of Knee with Old

Focus of Infection in Tissues Outside of Knee; Congenital Idiopathic Dilatation of the Colon; Ankylosis of Hip Following Sore Throat; Calculus in the Urinary Bladder; Tumor of the Tongue; Carcinoma of the Tongue; Tumor of Femur; Abdominal Fecal Fistula Following Puncture of Uterus; Tumor of Acilla; Talk on Cancer by Dr. W. D. Rodman, of Philadelphia.

Arson and Insurance.

I set my forces at work to investigate thoroughly the matter of arson and its relation to fire insurance. For a whole year they pursued this pioneer work. In order to ascertain if it were actually true that reputable fire insurance companies doing business in New York would issue policies to unknown applicants without previous investigation, my men in December, 1911, began taking out insurance on household effects located in apartments rented from time to time in various parts of the city.

Our first "plant" was a four-room flat in a tenement building at 239 East 101st St., the very heart of our so-called "firebug zone." This flat was "furnished" with the following articles, purchased for the purpose by the Fire Department:

Two wooden chairs, at 81 cents each.....	\$1.62
One small gas heating stove with tube.....	1.25
Three sash curtains, at 16 cents each.....	.48
One cuspidor.....	.09

Total value.....\$3.44

Upon these articles the Fire Department obtained fire insurance to the extent of \$60,500. We even obtained some insurance at an address where there were no household effects at all. Altogether we obtained fire insurance amounting to \$127,500 on articles costing \$3.96. This insurance was in the form of 135 policies. Practically every company which is a member of the New York Board of Fire Underwriters issued insurance policies to my men.

An inspection would have shown them that the property they were insuring was worthless. But no such inspection was made. Scarcely without exception, the companies did not consider it worth while to see what manner of household effects they were issuing insurance upon. They accepted the business without question.—From "Fire-Proofing a City," by Joseph Johnson, Fire Commissioner of New York, in the American Review of Reviews for December.

Abstracts of the Leading articles of the month.

Treatment of Rachitic Deformities.—

Bohm (Arch. f. Kinderhail.) says the modern methods of treatment of rickets, surgical and orthopedic, in cases of deformity. By the absorption of the lime salts from the bones a lime-proof osteoid material takes the place of the normal bone, and lesions of the bone forming zone causes them to broaden, while the epiphyses become irregular, and bony growth takes place beneath the periosteum. The bones contain less calcium and phosphorus than normal, and more water. Later the osteoid bone becomes sclerotic and eburnated and the bone abnormally brittle. The cortex is thick and the canal narrow. The deformities thus created tend to gradually become corrected spontaneously even up to the age of eight or nine years. Knock-knee shows little tendency to correction, while bow legs are often repaired by nature and growth. Vertebral curvatures show no tendency to correction. As far as orthopedic work is concerned there are three stages in rickets: first the stage of formation of deformity when no surgical or orthopedic treatment should be undertaken, but medical and hygienic measures have their place. The second is the stage of sclerosis and confirmation of deformity. The third is that of natural repair of deformity. The duration of the period of repair is very variable; surgical treatment should begin only when repair has ceased. Treatment now may be given by forced replacement, by osteoclasis, and by osteotomy. In slight cases of knock-knee and bow-legs forced replacement with plaster splints may be effectual. In severe ones osteotomy is to be preferred to osteoclasis. No shortening is produced, a plaster splint is worn for ten days, then the stitches are removed, overcorrection is made if necessary, and a new plaster splint is applied and worn for five weeks more, the entire treatment taking six weeks. Then massage and gymnastics may be used for a short time. The results are invariably good as is shown by the author's cases. Spurious coxa vara, from bending of the upper portion of the shaft, may be cured spontaneously. True coxa vara requires operation. All these operations are made through a small skin incision and are practically bloodless and subcutaneous. We may do an osteotomy and change the angle of the neck and shaft, cutting the neck two-thirds through, and fracturing the rest. It is then put up in plaster in a position of extreme abduction for ten days to six weeks. Genu valgus requires operation, varus does not.

Operation is done on the femur above the knee, two-thirds being sawed through, the remainder fractured, and the usual plaster dressings being put on, the first for a week, the second for five weeks. Prophylactic treatment in rachitic children comprises not allowing the child to sit up, and placing him in a lordotic position in plaster, with the legs raised backward, and the child on its stomach. When plaster casts are put on in this position the child is carried about thus and the cast removed only for bathing. Lumbodorsal scoliosis causes many of the spinal curvatures that are seen in the school child. It is generally recognized too late to cure it, after a compensatory curvature has occurred. All hope of cure is from early treatment by correction with plaster. In older cases the corset is useless and gymnastic exercises give the only hope of repair.

Treatment and Prophylaxis of Measles.

—Rouche (Jour. de med. de Paris) states that measles, being a contagious disease, should be limited in its spread. Secondary infections, especially bronchopneumonia, laryngitis, and otitis, should not occur. Sequelae also should be prevented since measles is one of the diseases that is most likely to be followed by tuberculosis. Starting with these premises the author seeks to show what measures we should employ to prevent the spread of measles. Since the incubation of the disease is so long isolation of the patient is useless, for the contagion has occurred before the child can be separated from his fellows. Rather isolate the children and the adults who have been in contact with the patient. This isolation should last from fifteen days to two weeks. Especially should we isolate every child who shows an acute catarrh of the nasopharynx, who coughs, sneezes, and has red eyes and running nose. In schools and asylums isolate the patient and all his companions at the same time. Isolation en masse is murderous. Each child should be placed in a separate isolation box until the diagnosis is complete. Disinfection in families is generally useless because the cause loses its vitality very early in the disease. In complicated measles isolation and disinfection are both useless. As to treatment, the hygiene of the child should be carefully supervised. Food should be liquid; the mucous membranes should all be carefully disinfected; the nasal passages with borated or mentholated vaseline or oil, or resorcin 1-50 in oil. The mouth and throat should be washed with boric acid solution or warm Vichy water; the vulva, with a weak solution of permanganate of potash. In diarrhea, bicarbonate of soda

should be given in small doses. There should be daily full baths and all skin erosions should be treated with zinc oxide ointment. The medical treatment may be reduced to quinine, acetate of ammonia, and benzoate of soda. This stimulating and revulsive medication is sufficient for all cases of uncomplicated measles. In the nervous adynamic form we have to combat the hyperpyrexia and typhoid state. Warm baths every four hours give remarkable results. The hemorrhagic form required stimulants and administration of calcium chloride. In dyspnea the cold bath gives good results. In bronchopneumonia hot baths should be given to produce vasodilatation and quiet the heart. In suffocating catarrh the bath is badly tolerated, and wet cups give the best results. All such cases should be carefully followed up to avoid later tuberculous infections.

Scopolamine-Morphine-Atropine as an Adjuant in Inhalation Anesthesia.

Morcom (Proceedings of the Royal Society of Medicine) says that the advantages of a preliminary injection of scopolamine morphine atropine as an aid to a general anesthetic are manifold. The drowsy condition into which the patients generally fall frequently enables the anesthetic to be administered without the patient waking up. This seems to be particularly the case in highly nervous patients—a very satisfactory point, as it is these patients who feel most acutely the preliminaries of the operation and the administration of the anesthetic. In this connection it should be mentioned that the initial administration of ether is sometimes liable to awaken the patient, owing to its irritation of the bronchial passages, so that it is best to commence the induction with some less irritating anesthetic. He says that he always uses the ordinary chloroform ether mixture, and then continues with open ether when the patient begins to go under. If this is done the initial stage of induction is almost ideal; the patients are absolutely tranquil, there is no struggling or excitement, the respiration is deep and regular, and the pulse is full and slow. It is found that much less anesthetic is required to obtain surgical anesthesia, and this is certainly very marked in the case of open ether. Nicholson, in 1909, estimated this reduction at 50 per cent.

When anesthesia has been obtained the pupils remain contracted and react faintly to light, the corneal reflex being hardly ever lost. This latter fact may render it difficult to judge when a sufficient degree of anesthesia has been reached, but a good idea can be obtained by paying careful attention to all details, such as the condition of the

respiration. The action of the atropine is noticeable owing to the fact that there is great diminution in the amount of the bronchial and salivary secretions, so that it is not necessary continually to clear out the mucus from the pharynx during the administration, and there is less tendency to post-operative bronchitis pneumonia. The writer says that he does not recollect a single case of either of these complications arising in patients treated in this way. A number of surgeons have stated that it is impossible to obtain thorough relaxation of the abdominal muscles when scopolamine-morphine-atropine has been employed, but he thinks this is the exception rather than the rule. It is in some cases due to the small amount of anesthetic employed, but very occasionally cases do arise in which it appears impossible to overcome this rigidity. Morcom has been impressed by the fact that this rigidity is very rarely a prominent feature in abdominal operations, gynecological or otherwise, where the entrance into the peritoneal cavity is effected below the level of the umbilicus, and most of the cases in which it does occur are those in which operations are performed in the epigastric region, in which situation the recti show greater development.

After the operation the patient, almost without exception, sleeps uninterruptedly for three hours or more, and this may be considered the most advantageous fact in this connection, as it does away to a great extent with postoperative shock, and also with the postanesthetic vomiting, which is so often such a distressing feature. Felix Rood, in the British Medical Journal of September 23, 1911, in a report on 400 cases, states that in 255 there was no vomiting, 120 vomited once or twice, and 25 did so several times. At St. Thomas' Hospital, however, the diminution in number of cases of postanesthetic vomiting has been even more marked than this, and the Sister of one of the female surgical wards reports that out of fifty consecutive operation cases so treated not one case of postanesthetic vomiting occurred. This treatment has been found so satisfactory in the gynecological ward at St. Thomas' that all operation cases have the preliminary injection as a matter of routine. The small proportion of cases in this ward that have postanesthetic vomiting may be gauged from the fact that of the last 127 cases operated upon there only six have vomited; of these six, four vomited only once, and then only slightly, two were considerably affected for twenty-four hours after operation, but one of these latter was an acute case, and the preliminary injection was administered only ten minutes before the commencement of

the operation. It should be mentioned that in this series the anesthetics were administered by different individuals, ranging from the senior visiting anesthetist to the most junior house officers.

A point that is frequently raised by critics of the scopolamine morphine-atropine injection is that it greatly increases flatulence and constipation following operation, but the atropine tends to counteract the effect of the morphine, and Morcom's experience is that the patients do not have, as a general rule, any more trouble in this direction than those who have not had the preliminary injection. The dryness of the mouth, caused by the atropine, is sometimes complained of by the patients, but generally proves to be a minor trouble, and can be rectified by frequently washing out the mouth with water.

He further states that roughly 600 surgical cases pass through his hands each year, of all of whom he has the personal care, both before and after operation. Of this number, 40% have a preliminary injection of scopolamine morphine-atropine, and it is his honest conviction that these latter have a much better time in every way than those who are not so treated.

A Note on the Treatment of Erysipelas by Buttermilk.—Arnold, in *The London Practitioner*, says that no medical man with any large experience of erysipelas is likely to express unqualified satisfaction with any of the traditional methods of treating the disease. The multiplicity of the remedies suggested is strongly suggestive of a lack of therapeutic power in, at any rate, the majority, and goes far toward relegating it to the class of *opprobria medicorum*.

He has used, in the treatment of erysipelas, a simple remedy which he believes to be as certain and even more rapid in its abortive action on erysipelas than the salicylate of iron as described by Dr. Lawrance. The remedy is buttermilk, which he orders to be applied on soft rags—buttercloth is excellent for the purpose—which are kept constantly wet with the remedy.

About seventeen years ago he had under treatment a girl of nineteen, suffering from erysipelas of the face and scalp. She was ill for several weeks, and had a great deal of pain, frequent relapses, and so on, but eventually recovered, and he sent her to the seaside to recruit. While there she very much overtaxed her strength by a long walk, and came home in a condition of exhaustion. The next day the erysipelas was back again in the face and scalp, the temperature ran rapidly up to 104° , and she suffered very severe pain. While waiting for the arrival of medical help, a friend

suggested that some buttermilk should be procured and applied freely, saying that she had heard a farmer's wife say that buttermilk was a splendid remedy in erysipelas.

The suggestion was followed; so buttermilk was got and rags soaked in it were applied to the inflamed surface. The pain was immediately relieved and quickly removed altogether. The temperature remaining high, however, it was suggested that, in addition to the local application, she should drink buttermilk. She did so, with the result that the temperature dropped almost at once from 104° to 99° . The inflammation very rapidly subsided, and the patient was practically well the next day. On returning from the seaside, the patient came to see him, and gave him a clear account of the whole experience. The evidence seemed good enough to justify a trial of buttermilk in any subsequent case.

The opportunity occurred in a case of facial erysipelas in a man, who had had a severe and obstinate attack about two years previously. There was an extensive inflammation, with high temperature and great pain, when Arnold was called in. He ordered buttermilk to be applied freely and continuously. The spread of the inflammation, which had been rapid up to that time, was immediately checked and the pain entirely relieved. The whole morbid process was aborted, and the next day the patient was practically well.

The writer does not think that he need give other cases in detail, but further states that since that time—some seventeen years ago—he has treated every case of erysipelas he has had to deal with by this method. The application must be very free, the cloths not being allowed to dry, but being kept constantly wet with the buttermilk. This method has given him quite uniform results; the spread of the inflammation is immediately checked on the application of the buttermilk, whatever the stage of the erysipelas; the pain disappears, and the whole morbid process rapidly aborts.

Arnold asserts he can find no allusion to this method of treating erysipelas in the *Medical Digest*, and he has not met any medical man who was acquainted with it, though it would appear to be an old country remedy, as, since first learning of it, he has found that it is fairly widely known to farmers and their wives. An interesting question well worthy of investigation is whether the undoubted abortive power of the buttermilk is due to the presence of beneficent microorganisms therein, to the antiseptic action of its lactic acid, or, perhaps, to the two combined?

Treatment of Eclampsia by Morphine and its Adjuvants.—Rouvier (Arch. mens. d'obst. et de gyn.) says that since we have not yet succeeded in getting an efficient remedy for the disease we must at least lessen the crises as soon as possible, and assist in the prompt elimination of the causative toxins. The author has treated twenty cases, of which two were without crises. An impartial analysis of these cases shows that the result of this treatment is more rapid and efficacious the earlier in the case the morphine is administered. In gravid, parturient, or puerperal patients who have had eclamptic crises or are liable to these attacks, we should give three injections of morphine, separated by an hour's interval, followed by three others separated by two-hour intervals. In addition there should be instituted a water diet, followed later by a half-milk diet, and later still by full milk. Lavage of stomach and intestine are also to be employed. This treatment is of value in all cases which are threatened with eclampsia. If possible it should be given before the first attack as a preventive measure. As soon as an attack has occurred morphine should be begun. Small or medium doses should not be given, since time is wasted and good results are not rapidly obtained. Kidney disease is not a contraindication for morphine, as it assists the kidneys. Unconsciousness is also not a contraindication, as some authors believe.

Esthiomene, or Lupus Vulvae.—Kurz (Jour. Obst. and Gyn. Brit. Emp.) says that the term esthiomene has been misunderstood and misapplied by many authors. She holds that it should be retained as a useful term replacing the expression "hypertrophy with ulceration." It should be clearly understood that it is a tertiary syphilitic lesion. "Lupus vulvae" should be replaced by the expression "tuberculosis of the vulva." Lupus vulgaris as it occurs in the skin, often of the face, has not been known to occur in the perineum. Tuberculous ulceration and tuberculous hypertrophy, however, do occur in that region. The term elephantiasis has been applied to hypertrophy occurring in chronically edematous parts whence the return of lymph has become obstructed or rendered sluggish, and where owing to the unhealthy state of the enlarged parts a low form of chronic inflammation has set up. The hypertrophied masses of esthiomene are not edematous tissue enlargements; they are granulomatous growths with a tendency to necrosis. Esthiomene is not a disease sui generis. It is not a form of low chronic ulceration occurring on a soil weakened by constitu-

tional syphilis or tuberculosis. Esthiomene is not a merely local inflammatory state following on irritation. There is no relationship between tuberculosis and esthiomene.

The only connection existent between esthiomene and malignant disease is that the former may occasionally undergo malignant degeneration. Esthiomene is not due to lymph stasis, hence it does not belong to the group of hypertrophies called "elephantiasic." The reasons for regarding esthiomene as a tertiary syphilitic manifestation are: (a) A direct or probable history of syphilis is almost always obtained. (b) The majority of early cases of esthiomene respond to antisyphilitic treatment. The late and chronic cases which do not respond do not indicate that esthiomene may at times be due to other causes than syphilis; there are many tertiary lesions, such as strictures and leukoplakia and others which do not yield to the usual antisyphilitic remedies and which are none the less due to syphilis. (c) The chronic course of esthiomene marked by attempts at healing with subsequent relapses, the absence of local disturbances, the non-impairment of the general state of health indicate the syphilitic nature of the condition. (d) The masses of cicatricial tissue with subsequent contraction producing severe strictures and extensive deformities is typical of no other disease. Where the necrosing process is in excess over the tendency to fibrosis we have the enormous tissue destruction characteristic of syphilis. (e) In no other constitutional disease is there such a constantly present combination of hypertrophy and ulceration as in syphilis. In elephantiasic hypertrophies there may be a small amount of ulceration. Often none is present. In tuberculosis of the vulva the ulceration is usually extensive and the hypertrophy of parts is slightly marked or absent. (f) The microscope reveals the typical gumma or granuloma of the third stage. (g) Up to the present time we find no cases recorded where the spirocheta pallida was found in esthiomene tissues. It is a well-known fact that the organism does exist, though in comparatively small numbers, in the lesions of the tertiary stage, but they are usually difficult to find. With easier methods of demonstrating the organism the time will no doubt come when the spirocheta of Schaudinn will be seen in esthiomene tissues with the same ease as the bacillus of Koch in tuberculosis lesions. (h) With equal certainty of proof will the positive Wassermann reaction relegate all cases of esthiomene into the field of tertiary syphilitic lesions.

Sterility Among X-Ray Workers.—

Jordan (*British Medical Journal*) says that while the fact is well known that exposure to the X-rays produces azoospermia, it is not yet appreciated that the worker who has taken every reasonable care to avoid exposing himself unduly to the action of the rays nevertheless becomes sterile after working daily for a year or so.

By reasonable care the author means having the X ray tube enclosed in a protective box, wearing a protective apron, conducting X ray treatment with the tube in a protective shield, and keeping at a distance of a few yards from the tube.

The means which he suggests as probably sufficient as a protection against the sterilizing influence of the rays are as follows: The tube box should be made entirely of wood, and should be completely lined on the outside with an efficient protective rubber material, with the exception of an aperture at the top, which is controlled by an adjustable diaphragm. A view of the tube may be obtained through a small lead-glass window covered with a flap of the protective material. The operator should always wear a protective apron reaching from the shoulders to below the knees, and, as these two means are not sufficient, he should also have an upright rectangular wooden screen, three feet, three inches in height and two feet in width, lined on both faces with three pound sheet-lead, and should place it close to the couch between himself and the tube box. A larger screen (four feet square) should be supplied for use while X ray treatment is in progress. The screens may be mounted on casters. Screens such as he describes are not in the operator's way to an uncomfortable extent. For treatment the tube should always be completely enclosed.

He says further that considering the entirely undefended position of the testes it is no matter for surprise that they should be affected by very small doses of X rays, provided they be repeated often enough. Wisdom suggests the advisability of inserting a small protective apron under the clothes as an additional measure. This expedient is in fairly general use, but it is merely an adjuvant, and cannot be relied upon in the absence of the other measures he has described.

Treatment of Hodgkin's Disease by Means of the X-Ray.—

Herschel Harris (*Australian Medical Gazette*). The report is based on observations from thirty cases of Hodgkin's disease treated by the x-ray during the last fourteen years. Arsenic had been tried in every case before presenting themselves for treatment, and all were

on a down grade when treatment was commenced. Improvement followed the rays in every case, although several cases relapsed shortly afterwards. All the cases were of a very acute type. The most successful cases were those occupying a single group of glands. In these good results varied in inverse ratio to the number of areas affected.

Probably the most successful result obtained was that of a married woman, who about ten years previous had the glands removed from the side of her neck by an eminent surgeon. They recurred after operation, when he exposed the neck to the x-rays. Some improvement followed, and later she was referred to the author for a continuance of treatment. The glandular enlargement diminished in size and gradually disappeared, and the patient is apparently cured. She was seen recently, and has now been free from any recurrence of trouble for nine years. The glands were examined by a competent authority and declared to be characteristic of Hodgkin's disease. Several other cases pronounced Hodgkin's disease known to the writer had been treated with x rays, and have remained free from the disease for several years.

In several cases when the disease was generalized, although one or two localized groups disappeared, the general condition of anemia and asthenia steadily progressed. Again it was noticed that when the mediastinum was involved and consequent dyspnoea followed, irradiating the thorax gave great temporary relief.

Brief description of technique: Rays are filtered through felt paper, leather or aluminium. With Sabouraud's pastile he gives a one-third of an erythema dose, every second day on three occasions, after which rest for two weeks, and then repeat the three doses again. The length of treatment and number varies with the progress of the case.

He states that these cases were not tubercular adenitis, as most of them had been diagnosed by competent authorities as Hodgkin's disease before being sent to him. All of these cases were saturated with arsenic before coming to him for treatment, and the arsenic was then discontinued.

Conclusions—1. X-rays in filtered doses, properly administered, are of considerable use in Hodgkin's disease. Most cases are relieved, and some have remained so for several years.

2. In the very acute cases, with marked cachexia and anemia, their use is naturally limited.

3. When employed a thorough and correct dosage must be used, and all the affected areas attacked, including the spleen and liver, if they too be enlarged.

4. The rays should be tried alone, and failing to respond then arsenic may be used at the same time.

Confirmed High Blood Pressure.—Man tle (Proceedings Royal Society of Medicine) remarks that it has been one of the important by-products of the present system of determining blood pressure, that the discovery of a high tension has so often led to immediate endeavor to reduce it at any cost. Owing to the gradual increase of blood pressure in these cases each individual readjusts his cardio-vascular mechanism to compensate this, and the physiological limit is now but 140 or 150 mm. of mercury, but may be 220 or 250, and to reduce this pressure below the new physiological limit is not only not indicated, but is bad therapy. Professor Oliver remarks that "The fact should be emphasized that supernormal arterial pressure is not itself a primary condition to be attacked or controlled as such. It is invariably a result of some pathological cause or causes, and it is, moreover, often a necessary evil, the result of conditions we cannot remove, and then it must be looked upon as a compensatory effort, as one of the natural defences of the body." After narrating the history of two cases of this nature, the author proceeds to discuss the true position of cases of high arterial pressure. These patients always give us anxiety, for we are confronted with two dangers: there is the danger of the rupture of a weak vessel, if we do too little, and a danger of too much in lowering pressure and weakening the cardiac force. A careful history of the case should be taken, and a complete investigation made of the cardio-vascular renal and alimentary systems in order to try and find out the cause of the high pressure, such as errors in diet, alcohol, syphilis, lead, and excessive worry. If the left ventricle is hypertrophied, it suggests the pressure has been persistently high for some months or years. Experience teaches that with a restriction of red meats and alcoholic drinks from the dietary of those who take them freely, the pressure, if not a permanently high one, usually diminishes, and this argues that purin bodies and alcohol probably act as vaso-constrictors. The proof of the splanchnic vessels being some of the earliest to become affected in arterio-sclerosis point to the necessity for the relief of congestion of the visceral vessels, which can be done by judicious purgation, 1 grain dose of calomel, and saline purgatives, two or three times a week. A free action of the skin should be encouraged by artificial means, such as massage, douche, and Naubheim baths, when these can be obtained, and intestinal lavage in

cases where constipation is obstinate. The cardinal principles of treatment resolve themselves into a strict regulation of the intake and an active outlet for the waste products, and moderate exercise followed by rest is desirable to give a better distribution of the blood, but sphygmo-manometric observations must be made from time to time as a guidance in treatment. If in spite of treatment the pressure continues high, we must conclude that this is a case of permanent super-normal pressure, and so long as no urgent symptoms arise, the patient may be allowed to do the work if he avoids excitement and sudden strain. We must not use any active means to reduce the pressure, remembering that it is probably an advantage, and necessary that the pressure should be high for the maintenance of an adequate supply of blood to vital organs. The author uses drugs of the vaso-dilator type only in emergencies, considering that it is sounder treatment to get rid of the bodies in the system which contract the peripheral vessels rather than by dilating the blood vessels with the offending poisons still intact. He gives iodides very sparingly, if at all, but if there is any syphilitic history they may be pushed.

The Treatment of Umbilical Hernia in Infants.—Smester (Jour. de Med. de Paris) describes a plan of treatment that he has adopted for thirty years with great success. The hernia is reduced and the edges of the ring are approximated by the finger and thumb of the left hand, while successive strips of court plaster are applied, so that a sort of pad is built up. Then, the edges of the ring having been secured, the little pad is fortified by a strip or two of diachylon (which must not, however, touch the skin) or by more court plaster. Finally, the whole construction is secured by collodium elasticum. The advantages of this little dodge are that the hernia is well retained, that the edges of the ring are approximated, that no hindrance is created to the play of the abdomen, and that the bath is not interfered with. Smester has not once in thirty years known it to fail.

An Analytical Study of Twenty Cases of Infantile Paralysis.—Sophian (Arch. Pediat.) says that in anterior poliomyelitis the bright and rational mental condition contrasts strikingly with that of the dull and stuporose condition in meningitis. Slight neck rigidity and a little marked Kernig phenomenon differentiate the former from the latter. In poliomyelitis the temperature drops and the general condition improves with the onset of the paralysis, but in meningitis the palsy is accompanied by high temperature. In polioencephalitis

the patient is dull and stuporous, but is clear and intelligent on being roused, contrasting with the disorientation, irritability and hyperæsthesia of the meningitic. The author lays stress on Macewen's sign—a tympanitic wooden note obtained on percussion over the fronto-parietal region, denoting hydrocephalus and frequently accompanied by ataxia. Polioencephalitis differs from tuberculous meningitis, its acute onset, its frequently extensive paralysis, and comparatively unimpaired sensorium. The author had three cases belonging to the myelitic, one to the Landry type, four abortive cases, twelve polioencephalitic forms; of the latter, five were hemiplegic, and two had ophthalmoplegia. The cerebro-spinal fluid is usually clear, but sometimes bloody. Globulin is present in the early stages, and may persist throughout the disease. With the onset of paralysis it usually disappears. The cells are moderately increased in the acute stages with a high lymphocytosis, while in tuberculous meningitis there is a uniformly strong globulin reaction and a high cell count. The fluid is always sterile in infantile paralysis.

Combined Bromide and Thyroid Treatment of Epilepsy.—Sicard (Jour. de Med. de Paris) points out that the tendency to bromism may be combated by the administration of thyroid gland. The writer administers in a cachet 0.1 gm. (1½ grain) of dried thyroid every morning for three weeks, suspending the administration from time to time for a fortnight. Two doses, each of 1 gm. (15 grains), of potassium bromide are given daily at equal intervals, say at 10 a. m. and 10 p. m., apart from meals, and dissolved in half a wineglassful, or less, of water. The bromide is to be given regularly without suspending the treatment. A chlorine-free diet is enjoined, and should acne appear, the pustules are to be treated with an application of chlorinated soda solution and sulphur ointment.

Urinary Antiseptics.—Jordan, in The British Medical Journal, says that from his researches the acidity of the urine is readily increased to an extent of more than double the normal by acid sodium phosphate, and to a considerably less extent by benzoates. With large doses of citrates it is easily rendered alkaline. Putrefaction of the urine and the growth of the staphylococcus is aided by alkalinity and delayed by acidity in proportion to the amount thereof. The reverse is the case with *B. coli*, but only to a small extent; its growth in both acid and alkaline urines is quite luxuriant. Hexamethylenetetramine is not itself antiseptic, but acts by producing formaldehyde in the urine. This only takes place in acid

urine, and the drug is inert in alkaline urine. The degree of antiseptic power is proportionate to the acidity, and where this is normal or lighter the drug is far the most efficient of all the urinary antiseptics. Sandalwood oil is a bad general antiseptic, but appears to have a specific action on the staphylococcus which may apply to cocci generally. It is of some use in alkaline urine. Benzoic and salicylic acids are very similar in action. Both are fairly efficient antiseptics in the urine, but are of very little use in alkaline urine. Boric acid is an efficient antiseptic. Its action is unaffected by alkalinity, so that it is the most efficient drug in alkaline urine. Uva ursi is quite a good antiseptic. Its action is certainly not due chiefly to the arbutin it contains. The following are legitimate practical deductions: The use of urotropin (together with acid sodium phosphate, which should always be given with it) as a prophylactic before any operation or procedure where the urine may become infected is of the utmost value, since if the urine is clean and highly acid, and sufficient urotropin is given in small doses to keep it continually present, the urine will not support the life of any organism, and becomes indeed a powerfully antiseptic fluid. Urotropin should only be given where the urine is or can be made acid, otherwise it is inert. It should never be given with potassium citrate in *B. coli* infections. If it is desired to try the effect of making the urine alkaline in these conditions one should use boric acid and uva ursi infusion.

Rupture of the Spleen; Splenectomy; Recovery.

—Seheult, in The London Medical Lancet, reports a case of traumatic rupture of the spleen in a boy aged thirteen years. In spite of the extent and gravity of the lesion there was an absence of urgent symptoms even after the lapse of forty-eight hours. It is remarkable that death did not ensue from hemorrhage, considering the fact that the patient was removed from place to place over a considerable distance before his admission to hospital. The condition of the pulse—viz., its irregularity, sudden variations, and slowness at various times—was an interesting feature in this case. The absence of postoperative sequelæ reported in other cases is also noteworthy. On looking up the literature at his disposal the author finds it is stated that removal of the spleen was practiced for the first time by Zuccarelli in 1554; if so, it would appear that the operation fell at once into disfavor, for there is no record of its repetition until more than three centuries later, when Pean, of Paris, successfully extirpated a cystic spleen in 1867. Since that time the opera-

tion has been performed for various conditions and has become a well-established surgical procedure. Up to a few years ago, however, the mortality rate was high; in 1887 it seemed to have been as high as 73 per cent.; Cecil in 1894 estimated it at 51.6 per cent. Since that date there have been decided improvements in the results, due largely to the abandonment of the operation for splenic leucemia and other unfavorable conditions which proved almost invariably fatal. In 1906 Davis was able to place the mortality at 18 per cent. As regards the removal of the spleen for rupture Reigner recorded in 1893 the first successful case. In 1902 Berger had collected from the literature 69 cases of this nature, with 29 deaths—a mortality of 42 per cent. In 1906 Horz had obtained the reports of 35 additional cases, with a mortality of 29 per cent. Splenectomy consecutive to wounds of the organ has, therefore, been attended with a fair measure of success; in any case, it is beyond doubt the most rational and hopeful treatment, especially when it is borne in mind that the mortality in the unoperated cases has been computed to be more than twice that of the cases in which splenectomy has been performed.

The Leukocytic Inclusions of Dohle.—

Cummins (The Journal of Medical Research) says that scientific work has been carried out in the investigation concerning the etiology of scarlet fever. Examinations of the lymph nodes, pharynx, skin, and blood have been made and from time to time a new etiological factor has been suggested. Streptococci may play some part in the production of the disease. The most recent suggestion has been offered by Prof. Dohle, of the Pathological Institute at Kiel, who upon examining the blood smears of thirty cases found within the cytoplasm of the neutrophilic polynuclears multiform bodies staining somewhat less darkly than the nuclei. These were found in a large percentage of polynuclears in all except two cases, which were examined late in the disease. There has been already some confirmatory work by other authors, namely, Kretschmer, of Strassburg, examined thirty scarlet fever cases and all showed inclusions. In one he found them a day prior to the eruption, but the largest numbers were found during the first four days of the eruption.

In the Research Laboratory, New York City, Nicoll and Williams, using the Manson and Giemsa stains, found inclusions in forty-five of fifty-one scarlet fever cases, who had been ill longer than eight days. Kolmer, at the Philadelphia Hospital for Contagious Diseases, examined 216 cases

of scarlet fever and confirmed the work of his predecessors. He also in diphtheria, sepsis, erysipelas, empyema and pneumonia reported positive findings. Franken of Halle examined 12 scarlet fever cases and found nine positive. In numerous other morbid processes and in normal people he failed to find inclusions. He considers that they are of diagnostic value. Some authors report that the examination of the blood of a series of normal children shows in many of them the presence of the inclusions. When a febrile condition intervened the inclusions materially increased in numbers. They consider that these are not "pathognomic" of disease—certainly not of scarlet fever.

The author records his personal observations which were briefly as follows: In 155 examinations of 95 febrile and 26 afebrile cases, 17 normal individuals and 16 laboratory animals, which were suffering from typhoid fever (17 cases), scarlet fever (15 cases), tuberculosis (14 cases), croupous pneumonia (4 cases), mumps (4 cases), local suppuration (4 cases), and various other diseases, in each case 100 neutrophils were examined, except for typhoid fever, in which fifty cells were examined.

The results of his investigation show that the so-called inclusion bodies are to be found in practically all febrile diseases and that they, in some cases, persist in decreasing numbers well into convalescence; in pyogenic conditions (chronic) of afebrile character; in severe injuries without febrile disturbance and in some normal individuals. They are apparently absent in laboratory animals. A nuclear origin seems probable. The alleged specificity to scarlet fever has not been corroborated.

The Dosage of Diphtheria Antitoxin.—

Wilson (New Orleans Medical Journal) says that in giving diphtheria antitoxin, the physician's purpose should be to administer one big dose early. Such doses offer the following advantages over repeated small doses: (1) They meet the amount of destruction by the tissues. (2) They neutralize the toxins already present. (3) They rapidly check and destroy the membrane, the fountain source of infection. In his own experience, more than two large doses have rarely been given, and the standard minimum dose was 10,000 units, and this was given intramuscularly, this method having the preference because it is less painful and does not leave the patient with a distressing infiltration as does the subcutaneous injection. The effect of the treatment upon the membrane of the nose and throat should be the guide as to results, but it is not seen for twenty-four hours; hence

it is bad practice, he believes, to administer the antitoxin every three or four hours, and a lapse of twenty four hours should therefore intervene between doses. Dr. Wilson says that the application of an icebag to the throat gives a great deal of relief, and an adjunct which has been a source of considerable benefit when there is distressed breathing, is the constant employment of a croup kettle containing compound tincture of benzoin.

Treatment of Headache in Children.

—Gaujoux (Presse medicale) found that obstinate headache in eleven children was due solely to insufficiency of thyroid secretion. In eight cases there were other signs of hypothyroidism, such as palpebral edema, anorexia, constipation, somnolence, and pains in the muscles and joints, but the remaining three presented a normal appearance. After a systematic study of the symptoms, with resulting exclusion of all the more usual causes of headache in children, should without delay resort to the therapeutic test consisting in the administration of a thyroid preparation. A daily dose of from one-third to three-quarters of a grain (0.02 to 0.05 gramme) may be given without risk.

Treatment of Infantile Diarrhoea by Saline Injections.—Day, in The London Practitioner, gives an account of the results obtained during the summer of 1912 in Cairo in the treatment of serious cases of diarrhoea in infants by saline injections, by drugs and by both together. Records of 444 cases treated in two special clinics were made use of in coming to the following conclusions: (1) Saline injections alone, without drugs, are capable of curing most cases of infantile diarrhoea; (2) Quinton marine plasma has no definite superiority over artificial saline of the same strength. Such hypertonic solutions are preferable to weaker ones; (3) the administration of medicines is preferable to saline injections as a routine treatment; (4) disregard of dietary instructions is the commonest cause of failure of out-patient treatment; (5) injections are valuable in proportion as the loss of fluid, by vomiting and diarrhoea, exceeds the intake; they should be given before actual symptoms of collapse arise. Saline injection treatment has these disadvantages: (1) It entails a certain amount of preparation, and the insertion of a needle; (2) a course of daily injections is usually necessary, and it may be difficult or impossible for patients living at a distance to attend so often; (3) much valuable time is taken up in giving the injection. The following points are in its favor: (1) The treatment is carried out under direct super-

vision, while the administration of drugs is chiefly entrusted to the mother; (2) any treatment necessitating daily observation is more likely to succeed than one in which attendance may be irregular; (3) saline injections are the recognized treatment for collapse. The early use of injections is of value in combating the exhaustion feared in bad cases of diarrhoea and vomiting. Results showed that for the average case medicinal treatment was to be preferred as a routine measure. Many cases which had not improved on medical treatment were transferred for saline injections, with a fair measure of success. When collapse symptoms were evident, injections were most valuable, and in several instances saved life. Several cases, however, who were not benefited by injection, and many who relapsed under this treatment were cured by medicine. Saline injections should supplement and not supersede drug treatment, and are especially indicated (1) in persistent vomiting, (2) with falling temperature with aggravation of other signs, (3) where there is exhaustion as shown by sinking of the eyes and loss of skin elasticity.

Treatment of Puerperal Endometritis.—

Delmas, (Presse medicale) is credited with strongly advising the use of tampons soaked in oil of turpentine in puerperal endometritis. After exposure of the cervix by means of a speculum, a strip of gauze varying in length according to whether the uterus is abortive or puerperal, is dipped in the turpentine and inserted systematically with long forceps into the uterine cavity. One end of the strip is left in the vagina, from the walls of which, previously irrigated with boiled water, it is kept separated by a tampon of cotton. All burning of the vulva is avoided if the parts are first copiously covered with petrolatum. The intrauterine strip is removed only after twenty-four hours.

In a first series of cases, the author used the turpentine where, with retained membranes, digital or instrumental evacuation of the uterus, followed by iodine, failed to overcome fever. The successful results noted then led him to employ it regularly after evacuation or curettage. It was found that after turpentine the pulse and temperature fell progressively during two or three days until fever was entirely gone.

The turpentine probably acts in several ways. Thus in the first place it is almost a specific antiseptic to the streptococcus, and also hinders the development of other organisms. Again, it causes a pronounced local afflux of leucocytes. Finally it is effectually absorbed by the uterine mucosa, with its widely dilated vessels, and

enters the general system, as shown by the odor of violets given off by the urine, which lasts for several days. Thus, as in the case of subcutaneous injections of turpentine solutions, the opsonic index of the blood is notably increased. The simplicity and efficacy of the turpentine treatment warrants, according to Delmas, its general adoption.

Three Unusual Cases of Renal Tumor.

—Joly, in *The London Practitioner*, reports the operative treatment he employed in the radical removal of kidney tumors. A case of hypernephroma and one of primary cancer of the kidney made excellent recoveries, and remained well, without any sign of recurrence about two years after the operation. The third case, also of hypernephroma, lost so much blood before he would consent to operation, that a fatal termination occurred. The writer removes the fatty capsule unopened with the kidney enclosed, in each case. The Dr. describes the following incision and procedure which gave him very good access to the malignant renal growth. The vertical limb was five inches long and parallel to and immediately outside the left linea semilunaris, its centre being opposite the umbilicus. The tumor was palpated through this opening and proved to be renal in origin. The pedicle was free from induration and there were no glands along the aorta. The peritoneum was closed, and a long incision made from the centre of the first one outwards and slightly upwards to a point about an inch below and in front of the tip of the last rib. The peritoneum was exposed in the anterior part of the incision, and the perinephritic fat in the posterior. The peritoneum was raised from the front of the tumor, and retracted inwards towards the middle line. Next the hand was insinuated behind the fatty capsule, which was separated from the muscles of the lumbar fossa. Finally the kidney was completely freed from all its connections, except those on its inner aspect. The ureter was divided just above the brim of the pelvis. The tumor was retracted strongly outwards, and the tissues separated from the side of the aorta. This dissection was made from below upwards. When the renal pedicle was reached, it was clamped and divided, as were also the capsular vessels. The tumor was thus completely freed and removed out of the lumbar fossa. It weighed $3\frac{3}{4}$ lbs. The patient made a good recovery and gained 4 stone in weight. In spite of the pain due to this, the abdominal wall remained quite firm, and there was no evidence of recurrence a year and nine months later.

Gallstones: A Plea for Earlier Operation.—Power (*British Journal of Surgery*) says that in 73 cases the patients suffered from cholelithiasis; in the remaining 17 there were inflammations of the gall bladder, due to various causes, but no gall stones. Fifty-eight were females, 32 males. The ages varied from 5 years to 82 years. The symptoms had lasted from a few days to twenty years or more. Fifty-seven patients were jaundiced at some period of the illness. The gall bladder was palpable through the abdominal wall in 28 cases. Except in the fattest people there was a localized tension of the abdominal wall in the right hypochondrium, even when there was no localized tenderness. Many of the patients had been treated for very long period, some knowingly for gall stones, others for "indigestion," a few for ague or some other form of intermittent fever. All had suffered from attacks of biliary colic, some, however, only slightly, others so frequently and severely that they were at last driven to surgery for relief, whilst others had suffered from a single attack of such severity that immediate operation was required.

The operation performed in most cases was opening and draining the gall bladder, and allowing it to heal by granulation. In only a few cases was the "ideal" operation performed. Latterly cholecystectomy had been more frequently employed, as the writer believes this diminishes the risk of recurrence of biliary calculi.

The operative results were: 26 simple gall stone operations without a death; 27 slightly complicated gall stone operations with 6 deaths; 20 "seriously complicated" gall stone operations with 11 deaths. Total mortality, 23.3 per cent.

The final results were ascertained in 23 patients who had recovered from operations for gall stones. Three had died from causes unconnected with liver or gall bladder; 14 were alive and in good health without any return of symptoms; 4 complained of attacks of pain from time to time, but this was not of a colicky nature but rather dragging, probably from adhesions. In no case was there any evidence of fresh gall stones having formed. In no case did a permanent fistula result. In 2 cases ventral hernia formed after operation for abscess in the neighborhood of the gall bladder. Even after operation for gall stones the writer enjoins care, e.g., more fluid, more exercise and more careful regulation of the bowels, to prevent their re formation, and to cure the chronic cholangitis which is usually present.

He sums up his conclusions thus:

1. The removal of gall stones is not at-

tended by serious risks in uncomplicated cases.

2. The continued presence of gall stones in the gall bladder and bile ducts leads to chronic inflammation of the neighboring tissues and organs.

3. This chronic inflammation is the chief cause of the complications which increase the danger attending operation for the removal of gall stones.

4. Early operation is the best method of avoiding complications.

5. Early operation demands early diagnosis. It is the duty, therefore, of the general practitioner to examine his cases of chronic dyspepsia with greater care, and not to wait until attacks of jaundice, biliary colic, or even more acute symptoms make an examination of the gall bladder imperative. The earlier the diagnosis is made the less will be the average mortality of the operation.

Relapses in Diphtheria.—Montefusco (Gazz. degli Osped.) reports the case of a child, aged 4 years, who had three attacks of diphtheria in eight months. The first attack in June (abundant Loeffler bacilli), the second in October (the local signs typical, but no diphtheria bacilli found), third attack in January, 1913 (diphtheria bacillus present). As diphtheria bacilli were found when convalescence was well established (in February), the author tried spraying into the throat a fresh culture of staphylococci suspended in physiological solution; this was done every four hours for two days. However, in spite of this treatment, diphtheria bacilli were still found in the throat. The addition of tellurate of potash to the culture medium renders the detection of the diphtheria bacillus more easy, as it checks the growth of other organisms. The author believes that the danger for diphtheria bacillus carriers is rather exaggerated, and practically it would not be possible to keep all diphtheritics in hospital until a negative swab was declared. In more than 4,000 cases the author has only quite exceptionally seen diphtheria occur in the homes of patients who have returned from hospital, and in the particular case reported there were four other children, none of whom contracted diphtheria from their brother after his three returns from hospital. Apart from the throat, diphtheria bacilli have been found in the urine and lungs and may be carried in that way.

The X-Ray Treatment of Psoriasis.—Freund (Wien. klin. Woch.) finds that an exposure without a preliminary curettage is usually followed by a relapse in six to eight weeks. To repeat the exposures after every relapse is to court such disasters as

x-ray dermatitis, atrophy of the tissues, and epithelioma. An alternative to this intermittent treatment is the application of a large single dose. But this may cause severe dermatitis without freedom from relapse. These are due to the survival of the most deep-seated areas of disease, which are screened from the rays by the overlying scales and tissues. To expose these areas the author cures the patches of psoriasis just before giving an exposure, the strength of which is one- to two-thirds of an exposure necessary for epilation. The slight hæmorrhage which follows is arrested by gauze compresses, and at the completion of an exposure the skin is bathed in a weak boracic or saline solution. Exposures are given on four to five successive days, at the end of which the parts treated secrete actively. In about ten days the excoriations heal and the skin regains its normal appearance. During the past four years the author has thus treated seven cases, in four of which recoveries were effected without relapses, although the observation period was over one year. The relapses in the three remaining cases occurred six months or more after the treatment, and were slight. With such a long interval between the treatment and a relapse, and with such weak exposures, there is no longer any danger in intermittent treatment, which should permanently cure these three cases also. The objection may be raised that curetting alone is responsible for the eradication of the disease in the author's cases. The writer treated different areas of psoriasis in the same patient with different methods. One area he treated with curettage and the x-rays, another he treated with the x-rays alone, another with curettage alone, another with curettage and painting with chrysarobin-traumatizin, another with curettage and a 30 per cent. pyrogallus plaster, and others with chrysarobin, pyrogallus, and sulphur-tar respectively. In every case marked improvement followed, but in most of the areas it lasted only for a few weeks. A year and a half later the only area to show no relapse was that treated with curettage and the x-rays. The curetting requires considerable skill and experience if every deep deposit of disease is to be reached. It is also a useful preliminary to treatment with radium, and in two cases in which radium was applied both to curetted and intact areas the disease recurred in the latter, but not in the former. As curettage predisposes to dermatitis, the radium should be cautiously prescribed. Curettage may cause the formation of scar tissue, though the author has not seen this complication yet; and even if scars did appear, they would be preferable to the disfiguring psori-

asis. The author does not favor curettage followed by the x-rays in early cases of psoriasis in which fresh outbreaks are occurring, for they effectively reduce the chances of permanent results. The combined treatment with curettage and the x-rays should therefore be reserved for those chronic cases which have failed to react to medicinal treatment, and which present hard, dry patches persisting for years on certain exposed parts.

Regional Anesthesia—Rood (British Medical Journal) notes that regional anesthesia can be used for any type of operation in which the nerves are accessible. He employs a 2½ per cent. solution of novocain in distilled water and introduces it through a fine needle down to the nerve to be anesthetized. The Dr. says the characteristics of this form of anesthesia are: (1) Granted that a suitable anesthetic solution is introduced around the trunk of a nerve, the whole area supplied by that nerve becomes anesthetic, bone, muscle, fascia, skin, etc. (2) The method can be used for operations upon inflamed tissues provided the injection around the nerve trunk be made at some point well above the septic area. (3) The anatomical relations of the part to be operated upon are not obscured by edema caused by a large quantity of injected fluid, as is sometimes the case with the wide infiltration method. (4) The anesthesia lasts several hours. (5) The anesthetic area is clearly defined by the anatomical distribution of the nerves, consequently there is no risk of suddenly overstepping the limits of the anesthesia with most unpleasant results to the patient. After employing eucaine, stovaine and novocain, Rood finds that by far the best results come from novocain.

Asthma in Children—Smith in (The London Practitioner,) has kept notes of thirty-six out of forty cases of asthma in children under twelve years of age. These show that it effects the sexes about equally and that the history of heredity is marked. The dry, adult type, with its intense dyspnea is not common before five years of age; but there is a distinct type of infantile asthma which may commence almost as early as birth. Of the thirty-six cases, thirty-four parents could tell when the first attack occurred. No less than twenty, or fifty-eight per cent, had their first attack within the first twelve months of life. There are two distinct types to be met with in children. One may be said to affect children between birth and five years, and the second, which closely approximates to the adult type of the disease, generally makes its appearance between five and puberty. These may be

described tersely as a moist and a dry asthma, for, in the first group, the predominant feature in a great number of cases is the accompanying or following bronchitis; while in the second group, though cough and bronchitis may be present in some cases in a varying degree, the dyspnea is undoubtedly the more prominent feature. The paroxysm occurs at any time of the day or night, but there is a distinct predilection for the early hours of the morning. If a history of recurrent attacks of dyspnea in the early hours of the night is obtained, one is much more frequently dealing with laryngitis stridulosa rather than with real asthma. In the infantile type, a paroxysm occurs, is followed by bronchitis which clears up, and another attack occurs in due course. In some cases, however, the attack of bronchitis is not over, before another attack of asthma appears, and, in this way, many of these children remain in a state of chronic asthma and bronchitis. These cases will be found the most unsatisfactory to treat. Many cases, especially those that start in infancy, seem suddenly or gradually to cease after three or four years; some apparently with treatment, others with no treatment at all. Cases that start in infancy are said to be more inclined to cease early than those starting in the second dentition are more amenable to treatment than those that start at puberty, and in later life. If the paroxysms are frequent and persist, there is a risk that changes will ultimately be induced in the lungs which will undoubtedly tend to shorten life. Permanent emphysema, as a result of asthma, is not common in children. Whatever view is taken of the mechanism which leads to the characteristic dyspnea, one will be compelled to accept the idea that, primarily at all events, it is the nervous system which is at fault. The proper comprehension of this underlying nervous factor is the key to all proper treatment of these cases. Where there is a predisposition to asthma, the presence of adenoids or any other lesion of the upper respiratory passages, or an unhealthy state of many other parts of the body may give rise reflexly to an asthmatic paroxysm. Regulation of the bowels in a case of chronic constipation may effect a cure when iodides, belladonna and other antispasmodics have failed. The rickety and ill-fed baby with an asmatic inheritance will have repeated attacks until the rickets or the diet is corrected. On the other hand, a permanent cure should not be promised when removing adenoids or cauterizing septums. If the attempt to relieve the patient by the careful elimination of all possible sources of irritation has failed, and

a suitable habitat has not been found where he or she is free from attacks, it will be necessary to fall back on drugs as a last resource,

After-History of Gastroenterostomy for Peptic Ulcer.—Bourne (British Medical Journal) mentions the after history of cases in which gastroenterostomy had been performed for ulcer of the stomach or duodenum. In the more recent cases there was an interval of at least nineteen months between the operations and the inquiry as to the present conditions of the patient, while in the older patients more than five years had elapsed. Of the 92 cases of the series 68 have been traced. Of these, three have died in the interval. The total mortality of the operation, plus that of the uncurd ulcer after operation, is 10.9 per cent. As to the results, nearly one-half the cases were in no way bettered. The operation was markedly successful in 43 per cent and hopelessly bad in 38 per cent. The older the patient the better the outlook. The figures show that the result of operation depends very largely on the time after food at which pain occurs. This varies from immediately after the meal to one and a half hours, and in proportion as this interval is long, so is the prognosis good. Cases of duodenal ulcer as a rule do much better after this operation than cases of gastric ulcer. The degree of hyperchlorhydria is of importance, cases showing a total acidity of 0.2 to 0.3 per cent reacting better than do those of a lesser percentage (0.12 to 0.19). Thus does gastroenterostomy, by drainage of the stomach, bring about two essential conditions for the cure of ulcer, namely, rest and normal acidity. Cases in which the ulcer is not found at operation do badly. Failures may be due to recurrence, or failure to heal of the original ulcer, or the formation of a jejunal ulcer, whilst apparent relapses may be due to adhesions or to carcinomatous degenerations.

Resorption of Fluid by the Pleura.—Naegeli (Zeitschr. f. d. gesamte Exp. Med.) says the rate and mechanism of the absorption of fluid in the pleural cavity is not yet known, although it is important to know how fluid is drained from this cavity, and whether a drainage tube, or merely a tampon, should be used after operations on the chest. To compare the rates of absorption of fluid by the pleura and peritoneum respectively, an isotonic saline solution containing 0.1 per cent. of potassium iodide was injected into the pleural and abdominal cavities of rabbits. The fluid was injected at the body temperature, and the rabbits were kept in a uniform temperature. The

urine was pressed out of the bladder just before the injection, and was subsequently examined every half hour for iodine, quantitatively and qualitatively. After an intrapleural injection iodine appeared in the urine in half an hour, the excretion reaching its maximum in an hour. Iodine was no longer found in the urine after thirty hours. Injected into the peritoneum, the iodine appeared in the urine in half an hour, but its excretion was more rapid than in the former case. From this the author concludes that the peritoneum absorbs fluid more rapidly than the pleura. The question was raised whether the lung and visceral pleura, or only the parietal pleura, absorb fluid. A pneumothorax was induced and the lung collapsed. The solution of potassium iodide was then introduced into the pleural cavity, the opening in which was closed. The appearance of iodine in the urine did not begin till two hours later, and did not reach its maximum six or seven hours after the injection. It was not at first clear whether this diminution in the absorption of fluid was due to the cessation of movement of the lung or to lessened absorptive power of the lung. To decide this point the arteries, the veins, or both the arteries and veins supplying the lung, were ligatured, the lung not being collapsed. The absorption was now reduced to the same extent as by a pneumothorax, and the rate of absorption could be regulated according to the number of branches of the arteries ligatured. It was therefore assumed that the mechanical movements of the lung have little to do with the rate of absorption. The conclusion was also drawn that the lung plays an important part in the absorption of fluid from the pleural cavity, and that increased circulation through the lung favors the rate of absorption of fluid from the pleural cavity. —British Medical Journal.

Serum Test in Helminthiasis.—Ghedini (Gazz. degli Osped.) believes that the serum reaction proposed by him in 1906 for the detection of various worms (taenia, echinococci, etc.) is valuable. The best results were obtained by the fixation-complement method. The meiostagmin and anapylactic reactions are not so satisfactory. More than twenty different varieties of worms have been tested, and amongst them the echinococcus figures 280 times. Various liquids were used as antigens, and as regards the echinococcus, the hydatid fluid from a sheep gives the best result. Suppuration or gangrene of the cyst does not interfere with the secretion. In reply to the objection that the serum reaction is not constant, the author says (as regards echinococcus, which is the most important as far

as man is concerned) it only failed eight times out of 100—sometimes the failure is due to faulty technique, or to too small a quantity of serum, or to an unsuitable antigen. Hydatids with very thick-walled cysts may not give passage to antibodies and so the test may fail, but on the whole the failures are much less than the successes. The objection that the reaction is not specific is met by asserting that unsuitable antigens were used. On the whole the author is satisfied that after his seven years' experience the serum reaction in question is of much value in the diagnosis of helminthiasis.

Non-Surgical Septicæmia.—Golubow (Zentrabl. f. inn. Med.) says that the occurrence of septicæmia and pyæmia apart from surgical sepsis has only recently been recognized. An exception is the form of septicæmia which has long been known to accompany malignant endocarditis. He believes that septicæmia, especially in its mild forms, is one of the commonest infective diseases. Such cases were usually diagnosed as mild attacks of typhoid fever or as "febris herpetica." In ten years he has seen more cases of non-surgical septicæmia than of typhoid fever. This does not indicate that septicæmia is the commoner disease, but that it is at present less recognized and more likely to lead to the services of a consultant being requisitioned. Of the last 20 cases seen, seven ended fatally; the remainder were mild cases ending in recovery. The symptoms in a severe case are high pyrexia with repeated rigors, endocarditis, involvement of one or more joints, and thrombo-phlebitis. In the presence of these the diagnosis is not difficult, providing the primary focus, which is frequently the pharynx, can be ascertained. In mild cases, however, the diagnosis may be difficult. In only two of the writer's 20 last cases was it impossible to find the primary focus (cryptogenetic septicæmia); one of these proved fatal. A microscopical and bacteriological examination may suggest the presence of sepsis. In other cases a diagnosis is possible only by exclusion of all other infective diseases, especially typhoid and para-typhoid (A and B) fevers, influenza, and malaria. It is unsafe to rely on an examination of the blood for micro-organisms, which gives a positive result only in severe cases. According to Lenhartz the result is negative in 50 per cent. of all cases. Hence a blood examination is of prognostic rather than diagnostic importance. If bacteria are found the infection is severe. Non-surgical septicæmia is in the majority of cases of streptococcal origin. Of 218 cases collected by Lenhartz,

only 18 were due to the staphylococcus, eight to the *Bacillus coli communis*, and one to the gonococcus. Mixed infection occurred in six cases, and the remainder were due to the streptococcus alone. Bacteriological analysis of the blood gives similar results. Of 1,200 positive cultures the streptococcus was found in 63 per cent., the pneumococcus in 18 per cent., the *Bacillus coli* in 17 per cent., and the staphylococcus in only six per cent. The comparative rarity of staphylococcus sepsis in "medical" septicæmia may in part be due to the fact that the staphylococcus produces metastatic (pyæmic) suppuration in 90 per cent. of all cases of septicæmia due to this organism, as compared with 20 to 25 per cent. of all cases of streptococcal septicæmia. Hence, staphylococcal septicæmia comes under the observation of the surgeon more often than the physician. Especially in the slighter forms of non-surgical septicæmia, pleurisy and pneumonic foci are frequently found. They are distinguished by no evanescent character. Well-marked pleural friction is found, and two or three days later no trace is left; or a small pleural effusion is completely absorbed in a week; or localized coarse crepitations are found, and a few days later the inspiratory murmur is normal. In even the slightest forms of septicæmia renal symptoms, such as albumen casts, renal epithelium, and red and white blood corpuscles in the urine, are frequent. Chronic sepsis probably accounts for many cases of pernicious anæmia, for Hodgkin's disease, leukaemia, peliosis rheumatica, dermatomyositis, muscular rheumatism, and other chronic rheumatoid affections.

The Treatment of Enuresis Nocturna.

—Klotz (Deut. Med. Woch.) does not think that the practitioner is justified in regarding the treatment of enuresis nocturna as hopeless. The writer says that, save in certain cases of idiocy and imbecility, a great deal can be done for the patient. In the first place, it is necessary to examine the patient thoroughly, and especially in regard to phosphaturia, vulvo-vaginitis, balanitis, phimosis, and constipation, and also masturbation. In the next place, metabolic disturbances must be looked for, such as diabetes, and organic nervous affections should also be kept in mind. He calls to mind that febrile attacks may give rise to nightly incontinence in previously continent children. If any changes of the foregoing kind are present, their rational treatment will lead to a removal of the symptom. On the other hand, in true enuresis nocturna, none of them are found, and the practitioner has to deal with hys-

teria, neuro-psychological constitution, and other forms of nervous deterioration in children. The first group of remedies are classified under suggestion. A large variety may be employed, and their success will depend on the manner in which they are applied. He includes injections of strychnine in the pubic region (or of physiological saline solution, which works just as well), epidural injections of various kinds, catheterization, asafoetida, etc., injections of silver nitrate into the urethra until a mild blennorrhœa is produced, the removal of the tonsils or adenoidotomy, and faradization. The latter frequently leads to extremely good results, provided that the treatment is not discussed before the patient, and that a great show is made of the procedure, the practitioner using a large apparatus, taking a long time in preparation, having rubber gloves, a long white operation gown, etc., on, and the patient being placed on an operation table. In a similar manner an injection of aromatic rhubarb, if carried out with complicated manipulations, or local cold douches may succeed, when faradization fails. If these or similar means do not result in a cessation of the bed-wetting, the patient should be removed to a fresh surrounding. It is advisable to select a children's home, hospital, or similar institution. If the child is to be sent to relatives, care must be taken to instruct the latter minutely in regard to the treatment of the patient, and the stay must be of several months' duration. Hypnosis has yielded immediate and complete cures at the hands of certain practitioners. A number of useful adjuvants may be added to any of the former methods of treatment. The quantity of fluid may be limited, and the child may be kept without any further drink after tea-time. The foot end of the bed may be raised, and measures may be adopted to attain sleep when the child lies on its side. Further, in some cases, it is advisable to awaken the child once, twice, or three times during the night, in order that the bladder may be emptied. Pfandler has suggested an automatic waker, consisting of two electrodes placed in a diaper, and connected with a battery and bell. As soon as the diaper is wetted, the bell rings and the child or nurse is awakened. He has no experience of the use of this apparatus. Finally, the author gives suggestions as to what he terms "physical dietetic" measures. The child should be lightly clothed, and exposed to fresh air as much as possible. Any feeling of cold, due to external cold, will stimulate the child to active movement, which in its turn will produce a greater excretion of moisture through the skin. Running and games in the open air will have

the same effect and will also increase the quantity of moisture given off in the expired air. A vegetable diet is ideal for the patient. Coffee, tea, alcoholic drinks of all kinds, etc., should be forbidden, milk limited, and fruit given to satisfy thirst. The personal skill of the practitioner will enable him along lines of this kind to obtain good results in the vast majority of cases of enuresis nocturna.

Floating Spleen and Its Relation to Obstetrics and Gynecology.—Montuoro Ztschr. f. Geburts. und Gynak.) says that floating spleen appears to be a disease peculiar to the feminine sex, as shown by the overwhelming majority of the observed cases. The reason for this has not been satisfactorily explained. Enlargement of the organ alone will not account for it, for while malarial splenic tumors are more frequent in males than in females, prolapse of such a spleen is never found in them. According to a number of authors the spleen becomes congested and enlarged during pregnancy, and this may have some bearing upon the etiology. In general, the factors concerned in the causation of floating spleen comprise enlargements of the organ, changes of the peritoneal folds, reduction of abdominal pressure, relaxation of the abdominal walls, etc., in connection with a traumatic factor or vomiting. While any of these conditions may be present in pregnancy, they do not suffice for an explanation, since otherwise floating spleen would be much more frequent during this period than at other times. Even the changes in the thoracic and abdominal organs caused by the wearing of a corset cannot be considered of etiological significance, because the majority of splenectomies have been performed in peasant women who do not wear corsets. Floating spleen has been observed in all regions of the abdomen and may contract adhesions with any of the abdominal or pelvic organs. Its presence only becomes serious when a twisting of the pedicle takes place because of the severe resulting changes in the splenic structures as well as the inflammatory reaction in the peritoneum and neighboring viscera. If pregnancy occurs in a subject of floating spleen the organ may be compressed between the uterus and pelvis or its pedicle may become twisted, requiring resort to splenectomy. Fortunately, this operation gives a favorable prognosis both as regards the mother and the continuation of the pregnancy. Floating spleen is rarely correctly diagnosed, the tumor being very likely confounded with inflammatory swellings or neoplasms.

The Albumin Reaction on the Sputum in Pulmonary Tuberculosis.—Fullerton (Glasgow Medical Journal) says that the examination of the sputum of a large number of patients shows that appreciable quantities of albumin can be detected in the sputum of sufferers from pulmonary tuberculosis. Albumin is also occasionally found, though much less frequently, in acute bronchitis and in pneumonia in the febrile stage and in the stage of resolution, and in bronchiectasis. Albumin was not found at all, or in minute quantities, in the sputum of cases of bronchial "catarrh," in the resolving stage of acute bronchitis and pneumonia, and in chronic bronchitis.

Ethyl Chloride in Cutaneous Epithelioma.—Seidelin (London Lancet) has obtained good results in rodent ulcer and in other forms of well-delimited cutaneous carcinoma by freezing with ethyl chloride. Application is easy; no special training or special apparatus is required; there is no inconvenience to the patient, and very little pain. The spray may be applied every second or third day. When in Mexico some years ago the author treated two cases in this way; he recently revisited that country and saw both patients, who were well, and had not had a return of the trouble.

Treatment of Heartburn in Pregnancy.—Hart (Guide to Midwifery) states while heartburn is a very common symptom in pregnancy, it demands attention, since there are always suspicious that it may prove a persistent condition. It may also indicate that in the later stages of pregnancy albumin will appear in the urine.

The patient should be given ten drops of the B. P. saccharated lime solution in each glass of milk she takes. The lime solution in question is made by shaking calcium hydroxide with a solution of refined sugar and allowing the excess to settle, and contains the equivalent of about eight grains (0.5 gramme) of lime in each fluid ounce (30 c.c.).

The following preparation should also be administered:

R Bismuthi subnitratiss, . . . gr. x (0.6 gramme);
Sodii bicarbonatis, . . . gr. vi (0.4 gramme);
Pulveris rhei, . . . gr. ii (0.13 gramme).
Fiat pulvis. Mitte tales no xxiv.

Sig.: One powder, thrice daily after food, in a wafer moistened with water.

Avoidance of Sudden Death from the Induction of an Artificial Pneumothorax.

—Lillingston in the (London Lancet) says that he does not believe that death, or the serious accidents, such as pleural reflex, laryngeal spasm, gas embolism, aspiration pneumonia, and uncontrollable accidental pneumothorax from puncture or rupture of

the visceral pleura, are unavoidable. He gives that the following "dounts" are essential, and that if heeded there will be little tendency to accident. (1) Don't inject gas without satisfactory oscillations of the manometer, or at a pressure greater than that of the atmosphere when making the first injection. (2) Don't spare the use of local anesthetics, for both the skin and the pleura. (3) Don't create a high intrapleural pressure. A pressure of forty centimetres of water may cause no discomfort at the time of injection, but it may be more than doubled by a subsequent fit of coughing, and a leak in the pneumothorax may thus be started. The visceral pleura may thus be ruptured with a resultant accidental pneumothorax. (4) Don't induce a pneumothorax during menstruation when reflex excitability may be high. (5) Don't puncture on the first occasion in many different places in a search for free pleura. It is better to continue the search for free pleura after a day or two. (6) Don't inject gas rapidly, or at a low temperature. (7) Don't use large needles, or needles with rough surfaces; and don't allow the rubber tubing to drag upon the needle during an injection. (8) Don't inject until the patient is in a comfortable and easy position. (9) Don't hesitate to withdraw the needle at the earliest sign of collapse. (10) Don't operate without brandy and a hypodermic syringe full of ether handy. The needle should be introduced, if possible, only at a point where the lung is healthy. The greatest single preventive of pleural reflex and sudden death is the proper and efficient anesthetization of the skin, and more especially, of the pleura. This has been proved on animals.

Miscellaneous.

Examination of Candidates for Assistant Surgeon.

Treasury Department, United States Public Health Service

Washington, November 19, 1913.

Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B Street, SE., Washington, D. C., and at the Marine Hospitals of Boston, Mass., Chicago, Ill., St. Louis, Mo., New Orleans, La., and San Francisco, Cal., on Monday, January 12, 1914, at 10 o'clock, a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for ex-

amination at these stations are received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two year's professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height.

The following is the usual order of the examinations: 1. Physical; 2. Oral; 3. Written; 4. Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon generals \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years' service up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon General, Public Health Service, Washington, D. C."

Abstract.

Dr. W. A. Puckner, director of the chemical laboratory of the American Medical Association, investigated a number of the products furnished by twenty different pharmaceutical manufacturers and the degree of accuracy attained by each house was published in the *Journal of the American Medical Association*, Sept. 13, 1913.

The results are given in detail and make it possible to summarize or classify them in various ways. For example, the average strength of all the preparations made by each house may be calculated. An objection to this method, however, lies in the fact that the preparations above strength, of any one house, might exactly counterbalance the ones under strength and the house receive thereby a perfect mark.

A more accurate method consists in calculating the average deflection from normal of the preparations of each house, and rank the houses in the contest in the order in which the average deflection is the least.

A third method would consist merely in stating the highest and lowest deviation from standard found in the products of each house.

By whatever method the results are summarized, The H. K. Mulford Company heads the list for accuracy of products.

The preparations examined, namely, hypodermic tablets morphine sulphate, tablets potassium iodide, solution of potassium arsenite, fluid extract of hydrastis and fluid extract of digitalis, should be divided in summarizing results, into two classes. The first four mentioned are amenable to exact chemical assay and it is possible, therefore, to determine within a fraction of one per cent. the exact deviation from standard, or conversely, approach to perfection of these preparations. Their standards are definitely fixed, either by the Pharmacopeia or by the manufacturer's claim—100 per cent. of the claimed strength being the target at which each manufacturer aims.

The other preparation, however, namely, fluid extract digitalis, is one for which no definite standard of strength has been fixed. The preparation is official but no assay processes have been provided by the Pharmacopeia, so that a preparation made in strict accordance with the U. S. P. directions may vary enormously in activity. A limited number only of the houses chosen for this contest make any attempt to standardize digitalis preparations. A few, however, have adopted physiologic methods of assay in an attempt to put on the market preparations of uniform strength.

Even in the absence of a fixed and official standard of strength, it is obvious that a fluid extract of digitalis should have repre-

sented in each cubic centimeter, one gram of a good quality of drug.

Dr. R. A. Hatcher, of Cornell University Medical School, who examined the digitalis samples for Dr. Puckner, and made a special study of this drug for a number of years, is the inventor of the process by which these samples were examined, and is fully competent, therefore, to express an opinion as to whether a preparation does represent a digitalis drug of good quality.

Dr. Hatcher's results with the nineteen fluid extracts examined in this contest forced him to the conclusion that the fluid extract of the H. K. Mulford Company fully represented a digitalis drug of good quality and that the next in value only possessed 65.8 per cent. of the strength of the Mulford preparation.

The H. K. Mulford Company Fluid Extract Digitalis was therefore taken as the standard, or 100 per cent. The other 18 preparations ranged from 65.8 per cent. down to a minimum of 29.25 per cent.

It cannot be claimed by those whose fluid extract digitalis was found to be weak in comparison with the H. K. Mulford Company sample that the latter is too strong, because Dr. Hatcher states that the Mulford preparation represents a good quality of drug.

To the credit of all of the firms, Dr. Puckner states that there was found no evidence of willful sophistication or adulteration in any product examined. He believes that none of the houses deliberately adulterate or sophisticate their standard drugs, but that the products of many of them are made by those "who are less competent and less skilled" than the others. It is the more complimentary to the H. K. Mulford Company, therefore, that it should attain the first place, with those who are doing their best to furnish standard articles. It is an emphatic endorsement of the competence and skill shown by the H. K. Mulford Company, and products of their manufacture.

Not a Steady Drinker.

A doctor's patient in Excelsior Springs the other day was answering the usual list of queries prior to entering upon a course of treatment.

"Are you a steady or a periodical drinker?" asked the physician.

"Periodical," was the reply.

"How long between periods?"

The poor fellow studied a moment, that he might answer correctly, and replied:

"About twenty minutes."—Ex.

The Merry Heart.

The beneficial effect of keeping up the

spirits of a patient who is wont to become depressed is well known. In fact, "to exhilarate the heart," says Burton, "has been the practice of every age and country as the best means of preserving life." Regarded as a psychological state, laughter has been thought to be merely the expression of the overflow of nervous energy, but this shows itself in many other ways than in visible mirth. According to Dr. W. McDougall, of Oxford, who read a thoughtful paper upon the subject, laughter is nature's protection against the depressing effect upon the system of our sympathetic tendencies. It may seem very ill-timed, but most of us manifest a desire to laugh when we see a person fall down, for instance. Our kinder feelings, however, soon prevail and, controlling our risorial muscles as best we can, we hurry to the spot to render assistance. Probably, if we did not give vent to our first impulse, the "useless minor sympathetic pains," referred to by Dr. McDougall, would become too much for us, and the length of our faces would daily increase. Medical men ought, therefore, to be the cheeriest of all people and the most readily moved to laughter. But it is because of the changed direction of mental outlook induced by cheerfulness and mirth which interact powerfully even upon physical conditions that a "merry heart doeth good like medicine." The old saying of Marsilius Ficinus—"for without mirth physic is of no force"—may be heartily commended to the notice of all medical practitioners as well as psychologists.—Medical Press and Circular, London.

Iodine in Corneal Ulcer.

Ganilla treats all cases of ulcers and ulcerations of the cornea with iodine, irrespective of the cause. The method he employs is the following: The eyes having been previously anesthetized with a few drops of 4 per cent. solution of cocaine, the end of an ordinary wooden applicator is sharpened to a pin's point and a little cotton-wool firmly wound round it. The point is dipped in tincture of iodine and the surface of the ulcer gently touched with it. The conjunctival sac is next thoroughly irrigated with distilled water.—British Medical Journal.

Effects of Ablation of the Parotid.

Lorenzo Neri in a preliminary communication presents the result of his experiments on the physiological and pathological effects of ablation of one or both parotids. He finds that removal of one parotid results in connective tissue hyperplasia of the remaining gland with a corresponding atrophy

of its glandular parenchyma. Ablation of one or both glands causes hypertrophy of the thyroid.—*Giornale Internaziale delle Scienze Mediche*.

Treatment of Diphtheria Bacillus Carriers.

Rolleston treated ten chronic diphtheria bacillus carriers by spraying and swabbing the throat or nose with a bouillon culture of *Staphylococcus pyogenes aureus*. In six faucial cases the findings became negative within two to seven days after starting the treatment. In the two nasal cases the treatment was ineffective. In all but two cases a mild form of sore throat was produced, but no complication ensued.—*Brit. Journ. of Child. Dis.*

A Reaction to Differentiate Human from Cow's Milk.

Bauer states that if there be added to two or three cubic centimeters of human or cow's milk one drop of a one-fourth of one per cent. watery solution of Nileblue sulphate (Grubler), both specimens will be stained blue—but greenish blue in the case of cow's milk and violet blue in the case of human milk. If to either specimen there be added five times the volume of ether, and if the mixture be vigorously shaken, it will be noted that the cow's milk retains its blue color, while the human milk is decolorized.—*Monatsschrift für Kinderheilkunde*.

Intravenous Infusion by the Drop Method.

Excellent results have been obtained by Friedmann by intravenous infusions given by the drop method. A canula is inserted into a vein at the bend of the elbow and is fed from a reservoir attached over the bed. A special clamp regulates the rapidity of the flow so that 50 to 200 drops per minute can be infused. The solutions employed were saline with or without digalen or epinephrin. The method is serviceable in exhausting diarrheas, cholera, ileus, carcinoma of the stomach and all infectious diseases accompanied by collapse. The blood pressure will not rise so suddenly as with the rapid infusions formerly practiced and the heart and arteries remain under the influence of the drugs more steadily so that the body has opportunity to overcome the collapse. The entire duration of the infusion was 5 to 23 hours and the amount of fluid infused 3 to 5 litres. The heart is never strained and the flow of urine is increased to a remarkable degree. Even patients with renal disease tolerate the amount of salt introduced in this way. Other drugs can also be employed in this way.—*Muench. med. Woch.*

Strontium Bromide in Large Doses in the Treatment of Epilepsy.

Callender writes that he has found that strontium bromide given in large doses more effectively controls the attacks of epilepsy than the usual bromides and that its administration is more frequently followed by a cure. To effect this result, he states that the treatment must be persisted in over an extended period of time, in many cases 10 to 12 months' treatment is necessary, and in a few cases even a few months longer.

Excluding those cases which are of old standing and in which the will power and brain seem impaired, and excluding those due to reflex causes, he finds all other cases susceptible to the treatment. He gives the strontium bromides in doses as high as one dram, three times daily. The cases which most readily yield a good result are the young adults. Attacks during the time the patient is under treatment are rare. The author finds that though the large doses are well borne by the stomach they cause a great deal of mental depression, but the patient, encouraged by the prospect of recovery, and suffering from the recollection of the attacks, readily bears the inconvenience. Acne seems to be much rarer than after the administration of the other bromides.—*The London Lancet*.

Treatment of Severe Anemias.

According to Weber, it is not necessary to transfuse large amounts of blood in the treatment of pernicious anemia since the repeated injection of small amounts will accomplish the same purpose and will usually stimulate the bone marrow sufficiently to cause a pronounced improvement. The author generally employs 5 Cc. of defibrinated blood. In the majority of cases, no after-effects were noted, but in one there was high fever for four days, with consolidation of the lung. Such accidents can be avoided by placing the defibrinated blood into the ice chest for 6 to 24 hours before injecting. The technique is as follows: 20 to 30 Cc. are withdrawn from the donor and allowed to flow into a sterile Erlenmeyer flask. The blood is then defibrinated by beating for 5 minutes with a sterile glass rod and then filtered through sterile gauze into a second flask. The following day, the blood is warmed and then injected intravenously in doses of 5 Cc. In all cases, the patients should receive arsenic subcutaneously and all the other measures employed for this disease.—*Muench. med. Woch.*

Cyanide of Gold and Potassium in Pulmonary Tuberculosis.

Five cases of pulmonary tuberculosis, free from fever and other complications and

with doubtful prognosis have been treated by Junker with intravenous injections of potassium and gold cyanide by the method recommended recently for lupus. The initial dose was 1 Cc. of a 1 per cent. solution, thoroughly diluted with saline solution. In all cases, there was a rise of temperature, accompanied by headache which was repeated with every subsequent injection. In some instances, there was a decided focal reaction like with tuberculin; that is, the cough and expectoration became more pronounced and more rales could be detected over the lung. A therapeutic effect is undoubted, yet it is generally better to employ much smaller doses, which give rise to no temperature elevation. The author now advises an initial dose of 1 milligram, to be increased to 3 or 5 milligrams if there is no reaction. The maximum dose is 1 to 2 decigrams and the injection should not be repeated oftener than every three or four days. It is impossible to say at present whether the favorable effect is due to a capillary paresis induced by the gold or whether the gold has a direct neutralizing effect toward the virus.—Muench. med. Woch.

Camphorated Oil in the Treatment of Peritonitis.

Vignard and Around speak highly of the use of camphorated oil in the treatment of cases of acute diffuse peritonitis. They introduced in the peritoneal cavity 200 to 300 Cc. of a 1 per cent. camphorated oil. This procedure very effectively inhibits toxic absorption and also lessens the formation of adhesions. They are convinced that the oil possesses the latter property to a very considerable degree as was demonstrated in a number of cases in which it was used and in which later there was a re-operation or autopsy. The camphor seems also to exert a tonic action on the heart and has also considerable antiseptic value. A marked improvement in the patient's circulation was also noticed soon after the injection into the peritoneal cavity and there was also a rapid fall in temperature. The authors point out, however, that the oil must be absolutely pure. To each kilo of oil 300 grams of 95 per cent. alcohol are added. The mixture is then shaken violently and allowed to stand for 24 hours, after which the oil is decanted. This process is repeated three times. The oil is then sterilized and the camphor added.—Rev. de Chir.

The Action of Hydrogen Peroxide.

According to an article published by Walbum, hydrogen peroxide is supposed to

inhibit the formation of enzymes from mucous membranes. The experiments were conducted chiefly with the katalase and diastase of saliva and the amounts present normally and after treatment with peroxide were carefully determined by the author. In a more recent contribution, A. Marcuse doubts this action of peroxide and shows that the mere washing out of the mouth with plain water will reduce the amount of katalase present. It seems probable that the water merely washes away what has accumulated and that the glands are not able to produce a like amount within a brief period. The effect of peroxide on enzymes is therefore not proven.—Berl. klin. Woch.

Subcutaneous Injections of Hexamethylenamine in Typhoid.

Triboulet and Levy write that with typhoid fever in children over six years of age they administered an initial injection of 0.4 Gm. of hexamethylenamine morning and evening. This dose was gradually increased until 4 to 6 Gm. were given daily in two doses. The preparation was used in a 40 per cent. solution and was sterilized by either a 20-minute exposure to a temperature of 60 degrees C. or by simple solution in sterile water.

The authors studied three cases with special reference to the urinary changes produced. Bathing was also used in these cases. In two cases vesical epithelium, pseudo-albumin and a trace of serum albumin was detected in the urine. Erythrocytes and globulin were later eliminated. The authors believe that the urinary changes were due to vesical irritation as the kidneys remained unaffected. The hypodermic injections were more effective than the usual oral administration. The adynamia disappeared, the diarrhea was reduced, the urine rendered more dilute and the tongue moist. In septic cases, especially with elimination of bacilli in the bile and with infectious enteritis it is probable that large doses of the drug could be used with benefit.—Presse Medicale.

Effect of Digitalis in Health.

A number of interesting experiments conducted by Bernoulli show conclusively that digitalis has absolutely no effect upon a healthy heart that has been fatigued by heavy work. The reaction of the heart toward work and the duration of the period required for a complete return to the normal are in no wise influenced. Digitalis is, therefore, no real heart tonic in the strict sense of the word. Very little can be expected from the administration of the drug

DIGESTIVE DISORDERS

—characterized by nausea, anorexia, eructations, pain, fermentation, distress and the usual train of secondary symptoms—are so promptly relieved and corrected by

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that a great many practitioners have grown to look upon this remedy as almost a specific in all forms of atonic indigestion.

Its systematic use rapidly raises muscular tone and the resulting improvement in the motility of the gastric muscles not only increases glandular secretion, but usually supplies the exact impulse needed to assure restoration of the physiologic activity of the whole organ.

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Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

"The Inhibitory Action of Listerine" (128 pages) may be had upon application to the manufacturers.

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as prophylactic as in surgery where a post-operative pneumonia is to be avoided. In most cases, where there are the first indications of an insufficiency, the drug should be used, but an improvement is only to be expected where the treatment includes absolute rest in bed. The author believes that digitalis will not make an insufficient heart more resistant and there will be little or no recuperation if the same amount of work that led to decompensation is continued.—*Muench. med. Woch.*

Treatment of Raynaud's Disease.

In one typical case of Raynaud's disease, R. Schreiber has obtained excellent results by incising the tips of the affected fingers and then applying suction. The cyanosis and anesthesia disappeared almost immediately so that the patient could again take up her vocation. As compared with the untreated hand, the fingers were red and of healthy appearance and all the anesthesia had disappeared. Unfortunately, this remarkable improvement lasted only three or four weeks when the patient returned to the hospital if possible worse than before. It was not deemed wise to operate her again so treatment with hot air was begun, with the most gratifying results. It is usually not advisable to employ the customary baking ovens since these patients are particularly susceptible to severe burns. The air, which need not be any hotter than 50° C., can be blown upon the fingers and other affected parts by means of a specially constructed spray.—*Muench. med. Woch.*

The Relation of Appendicitis to Diverticulitis.

Guibe concludes from his observations that the simultaneous occurrence of appendicitis and diverticulitis is not infrequent. This association may be a mere coincidence or there may be a causal relation between the two conditions. Sometimes the appendicitis results from the diverticulitis, but more commonly the affection of the appendix provokes a secondary infection of Meckel's diverticulum.—*La Presse Medicale.*

One-Man Franchise for the American Medical Association.

[It seems as though our bell gerent and persistent friend, Dr. G. Frank Lydston, has at last found the weak spot in the entrenched assurance of the smug clique which, from its high tower in Dearborn avenue, has for years exploited the American Medical Association, laughing at all warnings and defying all attempts to dislodge it from its seat of power. Lydston has made good his threat, and his promise;

his threat to the oligarchy that he would pull them down from their high place, his promise to the association that he would restore to them their organization to be administered of, by and for the membership. Alone and unassisted, he has boldly gone into court and obtained from the United States bench a decision to the effect that all of the business transacted by the clique through its centralized machinery during the past dozen or so years is illegal and unbinding, and an order to disband the machinery and reinstate the system which was in operation before the bare-faced steal of 1901.

The effect of this decision—unless the Supreme Court reverses it, which seems unlikely—will be a complete reorganization of the association on a thoroughly democratic basis and its re delivery into the hands of its membership. It will mean, in short, a one-man franchise. For years the great rank and file of the association, numbering nearly fifty thousand, has been exploited by the governing clique as a specious agency of numerical and moral strength for the prosecution of its ambitious ends. Under the new regime the clique will find this same vast membership a very real numerical and moral strength in the overthrow and future prevention of boss rule and of all the abuses which have grown up under administrative monopoly.

There is no good or valid reason why the election of officers should not be carried out by popular and practically one-man vote. The threadbare argument that the size of the organization makes such a method unwieldy cannot in these days hold water. A popular nomination and election of the officers of the American Medical Association is just as practicable, and it is just as desirable, as that of the President of the United States, and could be very well conducted upon the same lines. Indeed, the conditions and machinery of the association are not at all unlike those which obtain in the federation of the States and could, with very little change, be made to operate in precisely the same way. At present, however, the method pursued by the association is as though the voters should elect the presidential delegates and send them to the electoral college without the faintest idea, on the part of either delegate or public, as to who were the presidential candidates.

As in the Constitution of the United States, so in that of the A. M. A., the State societies are the constituent bodies of the association, and the local societies the constituent elements of the State societies. There is no reason in the world, so far as we can see, why each local organization should not, and could not, conduct its own

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When the therapeutic requirements point clearly to iodine, the physician may turn to **IODIA** with every confidence, for its influence over the later and more indolent processes of this disease gives it pre-eminence among medicines' most trustworthy agents.

PAPINE

is superior to opium inasmuch as it offers the analgesic properties of opium minus its narcotic and convulsive elements.

BROMIDIA

will prove to be a safe and effective means of relieving neuralgic attacks.

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polling upon the official elections, reporting them to the proper officer of the State societies, which in turn would report them to the central organization, to be reported to the association through the Journal. Installation of the various officers could then be carried out at the annual convention, as at present.

The matter of nomination has still to be provided for. This could well be taken care of by a nominating committee—which might be either a standing committee, or better a committee appointed at each convention—who should submit each year not to exceed a specified number of names—say three—of eligible and desirable candidates for each office, to be voted upon in the manner above suggested. Such a method of nominating would not materially differ from the present one, except in this important respect, that it would ensure always a choice between three candidates and open the way for the introduction of new blood into the cabinet by an automatic and impersonal process. No body as large and influential as the A. M. A., any more than the United States, should ever be restricted to one candidate, or apply the closure to official nominations.

Having thus nominated and elected officers by a broad and popular franchise, the next reform should direct itself toward investing these officers with the real functions and powers to which their offices, from the same broad and popular viewpoint, induct them. The office of the president, in particular, calls for this kind of investment. As it stands at present, the presidency of the American Medical Association is little more than a farce. The office of president of a large and influential body represents, more than all else, the broad public aspects of the organization, both inside and out. It is through him that the will and desires of the rank and file are impressed upon the executive branch of the administration, and because he thus embodies the public senti-

ment, he is able to whip the deliberative and executive departments into line with it.

Will anyone pretend that any such influence is exercised by the president of the American Medical Association? Will anyone, on the contrary, deny that the specification of his functions is deliberately designed to shear him of any such power? If the association is to be restored to anything like democracy, the president must be made a real officer instead of a mere figurehead. He must be given the appointive power of committees; his suggestion and recommendation must be given serious attention by the House of Delegates and Executive Board, if he has to send them a special message for the purpose, he should even be given the veto power in certain directions; and should be given the opportunity of presiding over a genuine meeting of the association, in place of a mere social talkfest. We regard the rehabilitation of the president as an exceedingly important step in the reformation of the association.

Finally, there needs to be a radical reform in the constitution in the provision for the conduct of its public business. As it now stands, the association does not comply with the spirit—if it does with the letter—of the charter under which it exists, for there is absolutely no provision for an annual business meeting of its stockholders. There should be a day set apart at every annual convention for the transaction—upon the open floor of the convention—of whatever matters concerning the policies and conduct of the association were proper for such an occasion. There is absolutely no reason why such a business session should not be held, and it is a most un-American and cabalistic state of affairs that no provision is made for it. Such a session should be provided for without delay, to be open to every member in good standing who cares to attend and make himself heard; to be presided over and directed by the president,

of the association, and constituting the court of last appeal in all matters concerning the general policies of the organization. With this meeting, and not with the House of Delegates, should rest the power to amend the constitution and by-laws.

With this trio of reforms effected—a popular vote, a real presidency and an annual business session of the whole association—the complexion of the whole situation would speedily and favorably change. It may be that the very same men would be returned to executive office that now occupy the positions, but they would be there on a different and unassailable basis. And whatever might be the sentiment of the rank and file, at any given time and upon any given subject, would promptly and effectually stamp itself in the executive councils, and translate itself into actual policies—which is the only plausible and satisfactory basis for the conduct of an American association, medical or otherwise.—Exchange.

Correlation Between Complexion and Resistance to Auto-Intoxication.

I should like to call attention to the extraordinary variation in the resisting power of the individual as manifested by the color of the hair, not only to the changes in the fat and color of the skin already referred to, but to all other consequences of auto-intoxication. The darker the hair the lower is the resisting power to auto-intoxication, and the more conspicuous are the changes which result from it. On the other hand, if the hair is red or of a peculiar towy color the individual has a minimum of resisting power to the action of these poisons, and that resisting power varies directly with the distribution and with the intensity of the redness of the hair. This is manifested very conspicuously in the influence exerted by the toxins on the appetites of the individual. The darker-haired subject will loathe the sight of food and frequently abhor any sexual relationship, while the red-haired subject rarely manifests these effects, even in the extreme conditions of intestinal stasis. This influence of toxins on the normal appetite is of far-reaching importance in our present state of civilization and is the source of much misery, discontent and trouble, to which I will not do more than allude here.—Andrewes, Proc. of the Royal Soc. of Medicine.

The Clinical Diagnosis of Latent Hereditary Syphilis.

Goldreich calls attention to the importance of this subject, inasmuch as in one-third of all cases of latent inherited syphilis the Wassermann reaction is negative. The most distinctive sign is enlargement of the

cubital lymph nodes. These were palpable in 104 out of 130 of the author's cases of latent syphilis. In non-luetic infants these were palpable in from 15 to 17 per cent, of the cases.—*Zeitschrift für Kinderheilkunde*.

Effective Procedures in the Treatment of Neuralgia.

The old practitioner knows from experience that it is infinitely more easy to prescribe for neuralgia than to cure it. Moreover, if he be a careful diagnostician he has discovered that its causes are many and diverse, precisely the same pain presenting in individuals suffering from obstruction of the ventilation of the accessory sinuses, and from acidosis, malarial toxemia, refractive errors, dental caries or defective nutrition. Many persons suffer excruciating pain at recurring intervals, and no cause whatever can be discovered to explain why. Then, all of a sudden a certain drug or combination of remedies affords relief and the neuralgia disappears never to return; or perhaps to reappear later on and defy absolutely every known treatment.

Each tooth should be tested and if any cavities exist the dentist must be visited promptly. Frequently eye-strain, overwork, worry, and dietary indiscretions are causes. More often still the patient suffers from intestinal fermentation associated with marked acidosis. The urine should be tested always.

Sexual excesses may produce neuralgia. The writer once treated a commercial traveler who had "tic" forty-eight hours after his return home from each month's trip. Every known remedy was employed without the slightest effect—except the removal of the epidermis from the affected area—and that was almost done! until suddenly inquiry revealed the true state of affairs. The gentleman was advised to be less ardent, and was placed upon reconstructive tonics and anaphrodisiacs. He never to my knowledge had neuralgia again.

Moral: While treating the condition always search diligently till you discover the cause.

The correct course to pursue is fairly obvious. Secure thorough elimination; in facial neuralgias search earnestly for and correct dental, nasal or aural defects and obtund the abnormal sensitiveness of the involved nerves. In every case the nares and auditory canal should be cleansed with a warm alkaline antiseptic (one Menthol Compound tablet to six ounces of water) and sprayed with Campho-Menthol. One Calomel, Podophyllin and Bilein Comp. tablet, half hourly for three to four doses followed three hours later by a full dose of

Salithia has proven the most effective eliminant.

If the urine is highly acid Sodoxylin should be administered three times daily for a few days. Give hourly, until relieved, one H-M-C hypodermatically or the "modified" formula internally; these usually afford prompt relief, especially if Guimethol is applied to the painful area and the parts covered with a compress wrung out of a hot solution of magnesium sulphate. The anti-neuralgic combination also frequently proves efficient; in severe cases, marked by twitching and throbbing, gelseminine should be pushed to relief or physiological effect. Ethyl chloride may also be sprayed along the course of the nerve.

Lobeline sulphate, administered hypodermatically, often relieves diffuse neuralgic pains in plethoric individuals. Cannaboid and atropine, alternated with full doses of anemoniu and macrotoid, control the particularly wearing neuralgia which appears before or during the menstrual period.

Nervous, debilitated individuals or overworked, worried men respond well to a course of the Nucleinated Phosphates and quinine ferrocyanide. These should not be administered, of course, until the severity of the pain has been mitigated and gross disorders of the body chemistry corrected. In rare cases acetanilid, with or without codeine, affords prompt relief, but there are safer and more rational remedies. Hot baths are always desirable and the application of the faradic or high-frequency current not infrequently proves curative.

Where an exhausted condition of the nervous system and lithemia co-exist it is advisable to insist upon a thorough course of treatment. If possible, the patient should take a vacation, diet carefully and submit his urine for examination every week. Rheumatic (Candler), Sulphur Laxative and the Triple Arsenates or Liquor Arsenii Comp. (Barclay) with Salithia each morning on rising will under such circumstances prove effective. If the urea output is low, boldine may be added.

It is well to remember that neuralgia of the fifth nerve encountered in young or nervous individuals is practically always of functional origin.—George H. Candler, M. D., Chicago, Ill.

Heart Disease.

From inquiries made by the author, cardiac cases with edema, cases with anginal pains, and cases where cardiac disease is secondary to renal disease do not seem to be improved by the ingestion of sugar. In a case of general paresis in which the pulse was failing, the author did not find it to

In the Treatment of Goiter

—and affections of the thyroid generally—effective as iodine usually proves, everything depends on the form in which it is administered. Thus it has been conclusively shown that results are obtainable from

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that are rarely witnessed from other preparations of iodine—at least with the same uniform effect on the glandular enlargement or the same gratifying freedom from gastric disturbance. Administered with system and perseverance **Burnham's Soluble Iodine** decreases the size of the thyroid gland, regulates its physiologic activity and promptly controls the secondary or constitutional symptoms that are often so serious.

Directions—In treating goiter 10 to 20 minims should be given well diluted three times a day.

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have any effect. In another case, however, he believes that the patient's life was saved by it. A woman, aged 77 years, who had pulse irregularity for some years, developed a bad heart attack, with rapid, irregular, feeble pulse, cyanosis, and attacks of paroxysmal breathing. There was no edema. Inhalation of amyl nitrite gave temporary relief, but the condition then continued for some days, the patient steadily getting worse in spite of digitalis, strychnine, dry cupping, leeching, and frequent inhalations of oxygen. One day she seemed to be dying; in the evening it appeared doubtful if she would live through the night. The author ordered some lumps of ordinary white sugar to be given in milk, and added some syrup to the patient's medicine, instructing the attendants to give her 4 ounces (120 Gm.) of sugar during the night. In the morning the patient was found very weak, but less cyanosed and with a stronger slower pulse. Digitalis had been omitted, as well as digitalin, as these had not had any effect. Four ounces of sugar were ordered during the ensuing twelve hours, and after that it was continued in smaller quantities for some weeks. The patient made slow but steady improvement. She gained strength, and at the time of writing was able to go out into the garden for a few minutes and to walk up and down stairs.—Denyer, in the London Lancet.

The Sexual Instinct.

Freud has discovered by way of psycho-analysis the existence of a sexual life in children and has described the phenomena in detail in his classic, "Drei Abhandlungen zur Sexualtheorie." The entirely new conception that the pure, innocent child could have a sexual life met much opposition. Besides this sentimental opposition, there is the infantile amnesia which veils the first years of childhood for most people up to the sixth or eighth year and hinders their acknowledging the fact of infantile sexuality. And still we know that our memory can be fully reviewed and reproduced at no time of life; on the other hand, psycho-analysis has shown that the very impressions which we have forgotten leave behind the deepest traces in our mental life and have become determining for our whole later development. Thus, there can be no real forgetting of childhood impressions, but only an amnesia like that which we observe in neurotics for their later experiences, the essential feature of which is a mere detention of consciousness (repression). This is the first amnesia which appears in the life of an individual and it seems probable that no hysterical amnesia would be possible without this infantile amnesia.

It is the same with the observations of sexual expressions in childhood as with many other observations, they only really impress one when they are examined and described collectively. The physicians who have once directed their attention to this side of the child's mental life will find in every case traces of a sexual instinct early expressing itself; hence Freud can assert without injustice that the time will soon come when one will publish as rare exceptions cases which in no way betray expressions of sexuality in the first years of life.

THE INFANTILE SEXUALITY.

Sexuality in the Suckling.—Freud has emphasized the fact that the child brings with it into the world the germ of sexuality and enjoys in the taking of nourishment sexual pleasure which it ever after seeks to procure by sucking, independent of the taking of food. The Hungarian pediatricist, Lindner, has devoted a penetrating study to the sucking or pleasure-sucking of children. The sucking which appears in the suckling and if it becomes fixed as a childish fault can be continued even up to the years of maturity, consists in a rhythmically repeated sucking movement with the mouth (lips) in which the object of taking nourishment is excluded. One part of the lips or any other skin surface which can be reached, perhaps the big toe, is taken as

the object on which the sucking is carried out. Therewith appears a complete absorption of the attention and the "pleasure-sucking" ends in falling asleep or even in a kind of orgasm. Often, there is combined with the pleasure-sucking a rubbing of certain sensitive parts of the body, the breast, the external genitals, etc. In this way, many children proceed from sucking to masturbation. There is no doubt that we are here dealing with a sexual condition which presents, however, many difficulties to its comprehension, since the instinct is not directed toward other persons but is gratified on the child's own body in a manner called by Ellis, "autoerotic." In this connection, the mouth and lips are revealed as erogenous zones, a significance which they retain in later normal life in the kiss. For many, it may occasion surprise to learn that sucking is exhibited independently of its relation to the hunger instinct. It is, however, plain that the mouth zone is at first concerned only with the gratifying of the hunger instinct; later, the desire for a repetition of pleasurable experiences gained in this way is separated from the need of taking nourishment, thereby transforming this mucous surface into an erogenous zone. It is to be assumed that even those children who later remain normal had the childish fault of sucking in whom the erogenous importance of the lip zone was constitutionally strengthened. If this accentuation persists, these children as adults become passionately fond of kissing, tend to perverse kissing or if men show a strong tendency to smoking and drinking. If the repression intervenes, however, then there is produced an aversion for eating and hysterical vomiting. Because of these different functions of the lip-zone, the repression is carried over to the hunger instinct. All later hystericals with disturbances of eating, globus, snoring in the throat and vomiting have during childhood been energetic suckers.

Both the essential characteristics of infantile sexual expression which the sucking displays, namely, autoeroticism and the domination of the erogenous zones, exhibit also the other activities of the infantile sexual instinct. Thus, in particular, the masturbation of the suckling which scarcely an individual escapes and which is plainly appointed to fix the future primacy of the genital zone for the later sexual functions. The action which allays the irritation and furnishes the gratification consists of a rubbing friction with the hand or a pressure of the tightly approximated thighs.

To one who is little acquainted with neurotics and who has not encountered these phenomena in adult patients in their full

importance, Freud's disclosure that the anal zone of the child may afford pleasurable sensations seems at first hardly conceivable. Nevertheless, one can occasionally observe in little children that they refuse to empty the bowels when they are placed on the closet because they obtain pleasure from defecation when the retained stool by its accumulation excites strong muscular contractions and in the passage through the anus produces a strong irritation of the mucosa. Therewith, the pleasurable sensation must be realized besides the painful one. The frequent intestinal catarrhs of childhood afford occasion for intense excitement of these erogenous zones. Intestinal catarrh in the youngest years makes the patients "nervous" as it is called. In later neurotic maladies, these exert a determining influence on the symptomatology of the neurosis, placing at its disposal the whole range of intestinal disturbances. Thus, the original masturbatory irritation of the anal zone which is often practiced by older children and adult neurotics with the aid of the fingers is one of the roots of the constipation so frequently found in neuropaths. The great importance of the anal zone is reflected in the fact that one finds only few neurotics who have not their special skatological customs, ceremonials, etc. It is just these coprophiliacs, that is, those who associated pleasurable emotions with the excements in childhood, who are most profoundly perplexed by the repression; Freud has shown the important part which these instinctive impulses destined to be suppressed play in the later character formation. Psycho-analysis of neurotics revealed the fact, purely empiric, that individuals who have successfully repressed an anal eroticism, which was originally intense, regularly show certain tracts of character in unmistakable form: orderliness, frugality, and stubbornness.

Also entirely new is the Freudian discovery that the neck of the bladder can serve as an erogenous zone. Pollution in the child lacking a sexual secretion seems to take the form of an excretion of urine and may lie at the bottom of many cases of enuresis. Further, in later life, especially in neurotics there occurs simultaneously with the sexual excitement a desire to micaturate and urination very frequently appears in dreams as the symbol of the sexual act. The bed-wetting which plays a great role in the previous histories of neurotics is repeatedly closely connected with masturbation.

The sources of all these sexual excitements lie in part in internal processes, in part are brought about through peripheral irritation of these zones (anal, genital) by

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the cleansing as well as by caressing of parents and nurses.—Dr. Edward Hitchmann, of Vienna.

Good Hope Hospital was opened in Duke, N. C., recently, and Thanksgiving Day was made special donation day with the result of the institutions' receiving benefactions from more than 200 citizens of the town and county.

The Trustees of the State Institution for the Feeble-minded held a lengthy session in Kinston last week. Dr. I. M. Hardy was continued as Superintendent until the next meeting of the Board, February 17, 1914, by which date the Trustees hope to have the institution in good working order and open for the reception of patients.

Dr. Chas. P. Ambler, of Asheville, was elected Illustrious Potentate of Oasis Temple A. A. O. O. N. M. S. at the annual session in Charlotte December 5, 1913. Drs. R. J. Noble, Selma, N. C.; H. B. Hiatt, High Point, N. C.; C. E. Cotten, Black Mountain, N. C., are also members of the official Shriners staff in North Carolina, and Dr. J. F. Rhem, of Newbern, Past Potentate, was elected one of the State's representatives to the National convocation of the Shriners in Atlanta, May, 1914.

Opening of a New Eye Hospital.

The Herman Knapp Memorial Eye Hospital has opened its doors in its new location, at the south-west corner of 57th Street and Tenth Avenue, New York.

The hospital was founded in 1869 by the late Dr. Herman Knapp, and under the name of the "New York Ophthalmic and Aural Institute" it has been in uninterrupted activity at 44 and 46 East 12th Street. During these forty-four years over 420,000 patients have been treated. The new building is a specially constructed seven-story fire-proof hospital building, with complete modern equipment for the treatment and study of diseases of the eye.

The Board of Trustees has deemed the occasion of its removal to a new building in a new location the proper time to change the name of the Institute in honor of its distinguished founder.

The Sensory Fibres of the Phrenic.

Matheson (Review of Neurology and Psychiatry) publishes a record of some experiments to show the presence of sensory fibres in the phrenic nerve. After discussing what is known as to the anatomical connection of the nerve, he says that the suggestion that the phrenic nerve had a sensory function probably arose in the first place from the clinical side. In 1866 Falot, who was himself the sufferer, described a disorder somewhat resembling angina pectoris under the title "De la neuralgie du nerf phrenique." Peter (1871) was the first to consider the subject of phrenic neuralgia thoroughly, and the condition obtained greater recognition. Clinical workers accepted without inquiry the statement made in some of the older text-books—a statement in support of which no evidence was advanced—that the phrenic nerve contained sensory fibres. Henie (1871), who gives a very good account of the distribution of the nerve, made such an assertion merely upon the ground that the nerve sent fibres to the pleura, pericardium, and peritoneum, and Schwalbe advanced a similar statement without any further evidence. Experimental work had previously been done, but it was inconclusive. Sherrington, from the examination of a fetus lacking a spinal cord found that the phrenic nerve is traceable from the diaphragm up through the thorax and neck to two filaments of origin, the larger of which comes from the fourth cervical ganglion, the smaller from the fifth ganglion. Stimulating the central end of the phrenic nerve has produced a rise in blood pressure. Matheson comes to the following conclusions: (1) The work of previous observers, demonstrating the power

of afferent conduction in the phrenic nerve, is confirmed. (2) Stimulation of the central end of the phrenic nerve brings about a reflex rise of blood pressure due to excitation, partly of muscle-sense fibres from the diaphragm, partly of sensory fibres from the serous membranes. Stimulation of the central end of purely muscular nerves, such as hypoglossal and subscapular, evokes a similar rise of blood pressure. The pleura and pericardium have apparently additional sensory fibres to those supplied by the phrenics. (3) Stimulation of the central end of the phrenic nerve brings about an increase in rate and depth of respiratory movement, a result similar to that produced by stimulating any sensory nerve. In no case was any expiratory reflex evoked; sensory impulses passing up the phrenic nerve play little or no part in the normal regulation of respiratory movements.—The Australasian Medical Gazette.

Subcutaneous Injections of Hexamethylenamine in Typhoid.

Triboulet and Levy write that with typhoid fever in children over six years of age they administered an initial injection of 0.4 Gm. of hexamethylenamine morning and evening. This dose was gradually increased until 4 to 6 Gm. were given daily in two doses. The preparation was used in a 40 percent. solution and was sterilized by either a 20-minute exposure to a temperature of 60 degrees C. or by simple solution in sterile water.

The authors studied three cases with special reference to the urinary changes produced. Bathing was also used in these cases. In two cases vesical epithelium, pseudo-albumin and a trace of serum albumin was detected in the urine. Erythrocytes and globulin were later eliminated. The authors believe that the urinary changes were due to vesical irritation as the kidneys remained unaffected. The hypodermic injections were more effective than the usual oral administration. The adynamia disappeared, the diarrhea was reduced, the urine rendered more dilute and the tongue moist. In septic cases, especially with elimination of bacilli in the bile and with infectious enteritis it is probable that large doses of the drug could be used with benefit.—Presse Medicale.

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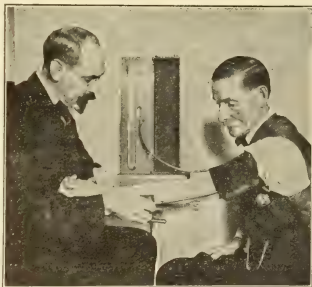
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greenish blue in the case of cow's milk and

violet blue in the case of human milk. If
to either specimen there be added five times
the volume of ether, and if the mixture be
vigorously shaken, it will be noted that the
cow's milk retains its blue color, while the
human milk is decolorized.—Monatsschrift
für Kinderheilkunde.

The North Carolina Society for Mental Hygiene Study was organized at Raleigh December 5th with a provisional executive committee composed of Drs. Albert Anderson, Raleigh; Jno. McCampbell, Morganton; and W. W. Faison, Goldsboro, (the Superintendents of the three State Insane Hospitals of North Carolina) with Dr. Anderson as Secretary. When a sufficient number of directors have been appointed by the committee a meeting for permanent organization will be held. The membership will be open to both physicians and laity, and those interested are invited to send in their names to Dr. Albert Anderson, Raleigh, N. C.

Dr. John Kuox, of Lumberton, has returned to his practice after spending some time in postgraduate work in Baltimore.

In Greenwood, S. C., on November 27, Dr. J. Lewis Smith, of Williston, S. C., was married to Miss Ethel Epting. After the marriage the happy couple went away for a few weeks trip when they will be at home in Williston where the doctor has a large and increasing practice. The Charlotte Medical Journal's best wishes accompany the young people, the bride being the daughter of that courtly and elegant South Carolina physician and gentleman, Dr. R. B. Epting, of Greenwood, S. C., and the groom one of his State's most worthy young medical men.

A stock company with a subscribed capital of \$30,000 has been organized at Elizabeth City to build a general hospital. Of the seven directors are Dr. Oscar McMullan, Dr. John Saliba, Dr. I. Fearing, and Dr. C. B. Williams, all of Elizabeth City.

Prof. E. B. Phelps, of the U. S. Hygienic Laboratory, Washington, D. C., at the request of the city council of Wilmington, N. C., is now in that city investigating its public water system with a view to ascertaining the practicability of securing an adequate supply from deep wells.

At his home in Newbern, N. C., on December 1st, Dr. N. H. Street, a well known physician of that city, suicided by shooting a bullet into his brain, producing instant death. He was 56 years of age, and had been very despondent for some time over his failing health.

Of more than usual interest in the social circles of Goldsboro, N. C., was the marriage at that place on December 5, 1913, of one of the delightful old Southern cities'

most lovable daughters, Miss Estelle O'Berry, to Dr. Ross McElree, one of Statesville's most promising young physicians. After a bridal trip to eastern cities the doctor and his bride will take up their residence at Statesville where he is most highly esteemed as citizen and physician.

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Cholecystitis.—O'Connor (The London Lancet) says that nothing short of cholecystectomy effects a permanent cure in the great majority of cases commonly known as attacks of gall-stones. The Dr. has formed a plan of attack which has resulted in rendering removal of the gall-bladder a very simple ten minutes' performance. Making use of the Robson position, and a free vertical semilunar incision:

(1) The liver is drawn forward and upward, a superficial incision is made with a knife along the line of attachment (generally adhesion) of the gall-bladder to the under surface of the liver; with the handle of the knife a space is rapidly made for insertion of the left index finger, and in a few moments the gall-bladder is freely detached from its hepatic connection—separation is carried right down to the level of the cystic duct. In order to control oozing a gauze pad is placed in the fossa fellea.

(2) Having next carefully isolated the whole operative field, the gall-bladder is aspirated, then seized and incised between two of Lane's forceps, the interior mopped dry, and calculi removed. The gall-bladder is then vertically split down to the level of the cystic duct by a few strokes of the knife, the tip of the left index finger is inserted into the cystic orifice, and the divided gall-bladder, with forceps attached to cut edges, is gathered up firmly, in one grip, in the

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left hand, and pulled forward. The maneuver renders the operation practically a bloodless one, and greatly facilitates subsequent separation of deep adhesions and examination of ducts.

(3) The cystic and common ducts are then carefully palpated with the right hand, and the tip of the left index finger removed from the opening of the former for passage of a small sound. If no calculi are discovered, the tip of the finger is replaced, and the assistant applies a strong catgut ligature, just below it, around the cystic duct. This ligature generally occludes the cystic artery. The two flaps of the gall-bladder are then cut away by a few transverse snips of a scissors, about half an inch in front of the ligature. When it is considered expedient to drain the bile ducts no ligature is applied; the cystic artery and other bleeding points are ligated, and the edges of the cystic duct sutured to the upper angle of the wound, and a small drainage-tube fixed in the duct. Before closing the parietal wound by three or four through-and-through strong silk sutures, the author usually inserts a large drainage-tube, which is left in situ for two or three days.

Intravenous Injections of Ergotin in the Treatment of Hemoptysis.

Garmagnano first determines the patient's blood pressure. If this is less than 110 he gives an intravenous injection of 0.50 gram of ergotin dissolved in 1 c. c. of distilled water. If the blood pressure is higher than 110 there is injected in addition 0.001 gram of morphine hydrochloride. A few minutes after the administration the cough and hemoptysis cease.—*La Riforma Medica.*

Temporosphenoidal Abscess Following Mastoid Disease and Aural Polypus.

Davis reports the case of a girl, aged 14, who was admitted to the hospital six weeks previously with vomiting, vertigo, and facial paralysis. A large aural polypus was protruding from the meatus. There had been otorrhea on and off for four years. There was no indication of any mastoid tenderness. The polypus was removed and the mastoid antrum opened; the roof of the antrum was eroded and an extra-dural abscess was evacuated. The brain protruded into the wound, but did not pulsate; a knife was therefore passed into the temporosphenoidal lobe, and 3 drams of pus were evacuated. The dura mater was snipped away over the brain abscess area and the wound was left open. The girl made an uninterrupted recovery.—*Proceedings of the Royal Society of Medicine.*

Treatment of Wounds and Denuded Skin Surfaces.

Delanglade (*Revue de Chirurgie*) points out the disadvantages of the dressings commonly used, moist as well as dry, in wounds covering a wide area of skin—especially burns—and discharging freely. In order both to secure efficient drainage, and not interfere with epithelial proliferation and healing, the author uses silk protective with numerous openings, which, after sterilization by boiling, is applied directly to the open surface, and then covered with an ordinary absorbent gauze dressing. The silk material does not become adherent and can therefore be very easily removed without causing hemorrhage or pain.

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Treatment of Diphtheria Bacillus Carriers.

Rolleston treated ten chronic diphtheria

bacillus carriers by spraying and swabbing the throat or nose with a bouillon culture of *Staphylococcus pyogenes aureus*. In six faucial cases the findings become negative within two to seven days after starting the treatment. In the two nasal cases the treatment was ineffective. In all but two cases a mild form of sore throat was produced, but no complication ensued.—British

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Dr. Tom A. Williams has returned from spending the summer in Europe.

The Washington Society of Nervous and Mental Diseases have inaugurated their seventh session by re-electing last year's officers as follows:-

President Dr. Tom A. Williams.

Vice-President Dr. W. M. Barton.

Secretary Dr. W. M. Hough.

The Society has a limited membership but welcomes Physicians and Surgeons interested in Neurology and Psychiatry.

It meets monthly on the third Thursday, at The Cosmos Club or a member's residence.

Dr. William W. Green, of Tarboro, N.C., was married on November 19th to Miss Sue F. Baker, also of Tarboro. Mrs. Green is the daughter of Dr. Julian M. Baker who is one of the most prominent physicians in North Carolina, at one time the president of the State Medical Society. Dr. Green is a graduate of the University of North Carolina and a very brilliant professional gentleman.

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A vacation period of two weeks each year will be allowed each pupil nurse.

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A Patients' Room.

During the senior year, nurses will probably be given terms of service as head nurses on different halls. Their capability to do this will be determined by the Superintendent.

In sickness, all pupils will be cared for gratuitously. The time lost through his or any other cause must, however, be made up.



A Patient' Room.

willing to perform any duty assigned to her.

Nurses laundry during the course must not exceed twenty-four pieces per week. This includes two uniforms, seven aprons, four kerchiefs, one white plain shirtwaist, and one whirt skirt.

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A Patient' Room.

the various cases. Plenty of interesting literature is available, if it is desired to pass away any waiting hours. Doctors having patients in the Sanatorium, or just visiting, will be expected to make themselves at home. Visiting doctors from out town, especially, will find the building most centrally located, and it is hoped that they will make it their headquarters as long as they are in our city. Any member of the profession will be welcome to visit the Sanatorium at any time.

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Idiopathic Dilatation of the Esophagus.

Heyrovsky (Archiv f. Klin. Chir., 1913, Bd, c, S. 702). in a valuable contribution to the literature on this subject, notes the fact that in the past two years ten cases have come up for treatment in one surgical clinic in Vienna (Hochenegg).

The dilatation usually begins and is most marked in the mid-thoracic portion of the esophagus, the channel assuming a spindle-shaped form. From increase in the length there is often a looping above the diaphragm. There is muscular hypertrophy; in some cases, however, in which the dilatation is extreme, there is atrophy.

The leading symptoms of this condition are dysphagia, regurgitation of the food and saliva, and a feeling of pressure in the chest after meals. In nearly or slight cases the patient often succeeds in forcing the food into the stomach by such maneuvers as drinking water, swallowing air, and then pressing with the glottis closed. In this way sufficient nourishment may be obtained to permit of the patient remaining for a long time in a good state of nutrition. In severe cases, however, death may occur from inanition.

An exact diagnosis of the condition can only be arrived at by esophagoscopy or by x-ray examination after a bismuth meal. The primary cause of the dilatation is not fully understood. Whilst cardiospasm is undoubtedly present in a large proportion of cases, in a certain number no spasm of the cardia is found. To account for the latter, such causes as primary atony of the musculature and congenital dilatation of the esophagus have been involved. The condition of cardiospasm and the extreme dilatation of the esophagus which accompanies it a dilatation much more pronounced than is ever met with above a simple stenosis of the esophagus, are best accounted for by some disturbance in the innervation of the parts involved. Experimental observations have shown that the vagus nerve not only supplies the musculature of the esophagus, but controls the tonus of the cardia. In certain derangements of the vagus it is possible to have, along with an atony of the musculature of the esophagus, a hypertonicity of the cardiac sphincter. Moreover, in not a few cases of cardiospasm met with clinically, an increased vagus tone has been shown to exist, and in some of these a definite organic cause for the reflex vagus irritation, such as ulceration in the esophagus or stomach, small diverticula of the esophagus, or even diseases of more distant organs, has been found. In only two instances as yet have definite pathological changes in the vagus nerves been demonstrated.

The treatment of the condition must vary according to the severity of the case. In slight cases of cardiospasm such measures as suitable diet, regular esophageal lavage, the administration of atropine, and possibly feeding by the stomach tube will often cure the condition. In more advanced cases dilatation of the cardiac orifice by means of an inflatable bougie passed downward from the mouth is undoubtedly the best form of treatment, and if skillfully carried out will give relief in the majority of cases. In a certain number, however, and particularly in those in which the esophagus has become lengthened and has formed a loop above the diaphragm, a bougie passed from the mouth cannot be made to enter the cardiac orifice. For such cases some operative measure is indicated.

Whatever be the operative method adopted, a preliminary gastrostomy should be performed, and time allowed for the patient to pick up strength before the more serious part of the operation is undertaken.

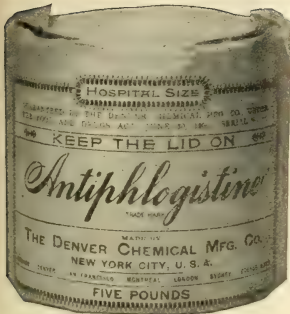
Of the operative measures, the favorite one has been opening the stomach and dilating the cardiac orifice from below by means of the fingers or some metal dilator. Extra-mucous cardioplasty, on the same plan as the corresponding operation at the pylorus, has also been carried out with moderate success.

Taking advantage of the fact that the esophagus is often definitely lengthened, Heyrovsky has carried out successfully in two cases a subdiaphragmatic esophagogastrostomy. This operation consists in freeing the lower end of the esophagus from its attachments to the diaphragm, pulling down the slack through the esophageal opening—in both of Heyrovsky's cases about 6 cm. of esophagus came down readily—and then performing a lateral anastomosis between the dilated lower end of the esophagus and the fundus of the stomach. The left vagus nerve may be in the way, but can be divided without harm ensuing. The great advantage of this operation over all other plastic and anastomotic operation on the esophagus is that the left pleural cavity is not opened, and the chief danger of such operations, namely empyema, is avoided.—Edinburgh Medical Journal.

Budwells—the Palatable Emulsion.

The Massachusetts Medical Journal in a recent issue had the following concerning Budwells Emulsion of cod liver oil.

"It has been a long quest with many physicians to get a thoroughly palatable, easily assimilated, emulsion of cod liver oil. The virtues of the oil, its alterative and tonic properties, are matters of common knowl-



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edge and only the crude methods of other days which offered the oil in unpalatable form have kept cod liver oil emulsions from being even more used than they are. Budwells Emulsions of cod-liver oil, manufactured by the Budwell Pharmacal Co of Lynchburg, Va., are permanent emulsions, so nearly tasteless as to oil, and yet so easily assimilated, that even children make no objection to taking it, while the most delicate stomachs retain it without difficulty or discomfort.

In their No. 1 Emulsion the combination of the iodides with their curative properties as eliminants of dead tissues, and further addition in the No. 2 Emulsion of guaiacol and creosote carbonate, to the food and tonic values of the oil, makes these preparations of especial value to the profession; guaiacol having well known remedial properties in pulmonary troubles and creosote carbonate being almost a specific in respiratory diseases.

Pituitary Extract.

To sum up we may state that:

1. Pituitary extracts have a powerful effect in inducing and in strengthening uterine contractions.

2. The type of contractions induced is similar to that which occurs normally, although at first there may be a tendency to prolongation of the pains.

3. Such prolonged contractions result in slowing of the foetal heart, but the child is seldom in danger.

4. When given in the late part of the first and in the second stage of full time labor the polarity of the uterine contractions is not interfered with, but in early abortions and early in the first stage a simultaneous spasm of the os may occur.

5. Its chief field of usefulness is in the first and second stages of labor, when there is delay due to feebleness of the pains, alone or when combined with other complications, such as malpositions of head, malpresentations, multiple pregnancy, slight narrowing of the pelvic, etc.

6. In the induction of abortion, in the treatment of abortion already in progress, and in incomplete abortion, its action is so uncertain that it is not to be recommended, except in cases where the os is widely dilated.

7. In the induction of premature labor its effects are uncertain, but if sufficient dosage be given they may be good.

8. In the induction of labor at full term and after better results are obtained than in premature cases.

9. It gives good results in many cases of post-partum hæmorrhage, but is not superior to the various preparations of ergot.

It has the power of sensitising the uterus, so as to allow these preparations to act more powerfully, the combination being most effective.

10. It is a useful adjunct in the treatment of placenta prævia, used in conjunction with rupture of the membranes, the use of hydrostatic dilators, or turning.—B. P. Watson, Can. Med. Asso. Journ.

Vaccination Against Tuberculosis.

Having been associated with Karl von Ruck in the application of his method of prophylactic immunization to tuberculosis of 262 of the 339 children reported upon by von Ruck, C. A. Julian (Med. Rec.) reports his observations on the practical side, including the results of recent examinations after a period of fourteen months since they were vaccinated, and adds like observations in 131 additional vaccinations made by himself. He considers the influence of the method upon children who were known to have or were suspected of having acquired a tuberculous infection prior to their vaccination. The writer's observation of degrees of local and general changes for the better, with complete restoration of the general health in all cases of suspected or manifest tuberculosis, which clinicians as a rule agree to accept at least as evidence of complete arrest if not of an apparent cure, justifies the assertion that, even from a most conservative standpoint, there has been an undoubted relation between the vaccination and the results shown, and that the method has resulted beneficially to these children in a degree and with a uniformity which we have not been accustomed to witness heretofore, a conclusion all the more justified by the fact that there has been no change in the mode of life, environment, or in dietetic, hygienic measures, and that no other treatment or medication designed to aid in the realization of the results has been resorted to.—Exchange.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an

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action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

State Board Examination Questions of Oklahoma.

OBSTETRICS AND HYGIENE.

1. When do you use ergot in obstetrical practice, and for what purpose?
2. Give in their order the three most common presentations.
3. How long can the child live before delivery with the placental circulation cut off? What precautions should be used to prevent compression of the cord in breech presentation?
4. What symptoms would cause you to suspect a rupture of the uterus? How would you manage a case?
5. What are the stages of labor?
6. Define abortion, miscarriage, premature labor.
7. Define puerperal septicemia. Give diagnosis and treatment.
8. What precautions would you use to prevent inflammation of the mammary glands? Give in detail your treatment of mammary abscess.
9. Give instructions for the prevention of the spreading of typhoid.
10. Is cerebrospinal meningitis contagious? If so, how are the germs conveyed?

GYNECOLOGY.

1. Differentiate fibroid, pregnancy, ascites, fat.
2. Diagnose and treat tuberculous endometritis.
3. Give indications for and technique of operation for amputation of cervix.
4. Give indications for and technique of trachelorrhaphy.
5. Make diagram showing relation of uterus, tubes, ovaries, vagina, bladder, and rectum.
6. Differentiate pudendal hernia, abscess of Bartholin's gland, and tumor of labia.
7. Describe venereal warts. Give etiology and treatment.
8. Vulvitis. Give etiology and treatment.
9. Give indications for knee-chest posture in office treatment.
10. Give indications for use of hot vaginal douche.

SURGERY.

1. What are the varieties of ankylosis?
2. Give symptoms and treatment of fractures of the nasal bones.
3. State the most common seat of frac-

ture of the clavicle and describe a method of treatment.

4. Describe the treatment for fracture of lower end of the humerus.
5. Describe a modified circular amputation of the leg.
6. What are the indications for excision of the knee joint?
7. How are wounds classified?
8. Give a full description of the operation for thyroidectomy.
9. Give the indications for the removal of the mammary gland.
10. Describe an operation for circumcision.

A Few Examination Questions of the Ohio State Medical Board.

ANATOMY.

1. Locate and describe the scapula.
2. Give the course and relations of the brachial artery.
3. Give the boundaries of the fourth ventricle.
4. What structures pass through the jugular foramen?
5. Describe the urinary bladder of a male and give its relations.

PHYSIOLOGY.

1. Name the principal varieties of connective tissue, where are they found, and what purpose do they serve?
2. State the disposition of the fat principles of food after digestion; carbohydrate principles; effect of alcohol in small quantities with food.
3. What is understood by absorption?
4. Name four forces concerned in the circulation of the blood.
5. What effects do extremes of temperature have on respiration? What effect has age?
6. Describe the suprarenal capsules. What is their function?
7. What is the influence of the nervous system in the production of sweat?
8. Name the five laws of reflex action (Pflüger). How do they work?
9. Describe the process known as ovulation.
10. Describe the function of the tympanic membrane; eustachian tube.

CHEMISTRY.

1. Give properties and chemical formulæ of (a) carbon dioxide; (b) carbon monoxide.
2. Give a test for indican and state its clinical significance when found in urine.
3. Define (a) aldehyde; (b) alkaloid; (c) glucosid.
4. Name and differentiate the three classes



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of sugar.

5. What are proteins and from what are they derived?

MATERIA MEDICA AND THERAPEUTICS.

1. Briefly discuss the serum and vaccine theories.

2. Name four principal serums, give mode of administration, dose, and use of each.

3. What drugs would you use in anemic conditions? Write two prescriptions using the drugs named.

4. Mention two intestinal antiseptics. Give therapeutic use and dose of each.

5. Name three hypnotics; indicate use and dose of each.

6. State the physiological action, use, and administration of hot and cold water.

7. Name two cardiac stimulants and

sedatives, and indicate dose of each.

8. Give the composition of Dover's powder. State its action, use, and dose.

9. Give the physiological action of nuxvomica, name its principal alkaloid, and state its use and dose.

10. Give the range of indications for the use of galvanism and high frequency currents.

Hereditary Brachydactylia.

Drey reports the case of a family in which for five generations this condition was observed in a number of individuals, some of whom had defects in the terminal phalanges combined with ankyloses of the terminal joints, and some of whom had only one of

these deformities. A direct heredity was perceived in the last three generations.—*Zeitschrift für Kinderheilkunde.*

Treatment of Goitre by Iodine Absorption from the Skin.—Tytler (*British Medical Journal*) says that for the last five years he has used the following method in the treatment of goitre: A piece of lint large enough to cover the growth and the skin for three or four inches beyond is soaked in a lotion consisting of one drachm of iodine tincture in eight ounces of water applied to the neck at bedtime and left on till morning. If a stronger solution is used it produces inflammatory reaction and prevents absorption. He states that he has employed this plan in many cases, but that only three have continued long enough to produce a satisfactory result. They were all young men, aged eighteen years and upward. Two were out-patients, and over two years elapsed before the swelling materially diminished. In the one private patient the swelling was reduced two inches in eight months. The difficulty, he finds, is to get patients to persevere with the treatment.

Scopolamine-Morphine-Atropine as a General Anesthetic.—Norbury (Proceedings of the Royal Society of Medicine) says he believes that one may justly draw the following conclusions from the cases in his experience:

That scopolamine - morphine - atropine mixture has a field of usefulness as a general anesthetic in operations on diabetic patients, and especially so in amputations for gangrene associated with diabetes.

It is similarly useful in amputations upon very feeble patients, the subjects of chronic bronchitis, etc., or suffering from advanced disease of the circulatory system, and where it is of great importance to avoid "shock."

When employed alone it is of little use in cases in which complete muscular relaxation is essential, but in this connection it has its advantages as an adjunct to inhalation anesthesia: the patient being semiconscious at the time that the inhalation anesthesia is commenced, less anesthesia is required, shock is reduced to a minimum, and sleep is secured for some hours after the operation.

The Intramural Spread of Rectal Carcinom.—Cole (*British Medical Journal*) states his result in the study of twenty cases of rectal carcinoma, in eighteen of which the bowel was removed by operation. The operation in thirteen cases was radical abdominoperineal as described by Miles. In three cases the malignant disease was

situated above the pelvic colon. The length of bowel removed in these sixteen cases was from 9 inches to 23 inches. In two cases a local reaction was practiced.

The growth in every case was an adenocarcinoma. The favorite site of origin in cancer was in the anterior lateral wall, from which point the growth extended around the bowel, a partial indication of its progress being afforded by ulceration, which begins to occur at a very early stage. Carcinoma spreads more widely in the submucous coat than is indicated by the surface ulceration. The muscular coat is invaded to a greater extent.

The tendency of the stroma of the growth is to progressive contraction, and the pull thereby communicated to the deeper layers of the adjacent but uninvolved bowel wall produces that eversion of the margins of the ulcer which is such a marked feature of these growths. Eversion of the edge of malignant ulcers in other situations may equally be a surface indication of subjacent infiltration greater in extent than the area of ulceration. Puckering of the peritoneum is another phenomenon due to the contraction of the stroma, and it is possible that the first stage of invagination may be brought about by the same means.

The pathological findings indicate the wide diffusion of carcinoma even though the obvious lesion be small and point the necessity of going far beyond the usual one or two inches above and below the seat of invasion.

Chronic Arthritis.—Jones (*British Medical Journal*) says the general tendency to consider chronic arthritis as of a cryptogenetic infectious origin finds support in the therapeutic experience of the writer. Twenty consecutive cases are reported which clinically suggested a streptococcal origin, although the bacteriological examination was negative. The cases were, in the majority of instances, of long standing; they had resisted general therapeutic measures; and no source of infection was clearly indicated. Effusion into joints was rare, and the fluid when removed by puncture was invariably sterile. Blood cultures were also sterile whenever investigated. For various reasons streptococcal infections were suspected, and the patients were accordingly treated with vaccines made from streptococci obtained either from the mouth, in cases of oral sepsis, from the urine, or from the feces. Eight out of 20 unselected cases gave strong therapeutic evidence that their arthritis was due to infection by streptococci chiefly derived from some part of the alimentary tract.

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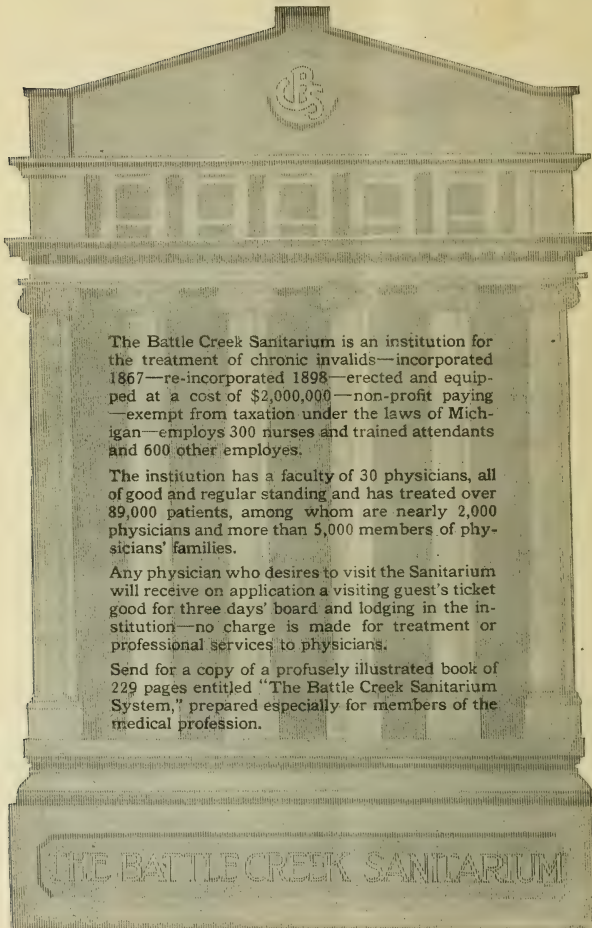
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October, 1913.

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705 S. Third St., Louisville, Ky.
Albert E. Sterne, M. D., Pres., Indianapolis.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Atlanta, Ga.
December, 16-19 1913,

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.
Frank A. Jones, M. D., Pres. Memphis, Tenn.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Wilmington, N. C., Feb.
1914.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Southgate Leigh, M. D., Pres.
Norfolk, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Montgomery Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.
R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Kansas City, Mo.,
October, 1913.

F. H. Clark, M. D., Sec., El Reno, Okla.
W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Olando, Florida,
May, 13, 1914.

J. D. Fernandez, M. D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Bowling Greene, Ky.,
(Date not yet decided,) 1913.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

D. O. Hancock, M. D., Pres.,
Henderson, Ky

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at New Orleans, La. 1914.

L. R. DeBuys, M. D., Sec.,
141 Elk Place, New Orleans, La.

Ered J. Mayer, M. D., Pres. New
Opelousas, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Columbus, Miss.
April. 1914.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

L. C. Feemster, M. D., Pres., Nettleton, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1913.

Dr. R. E. McBride, M. D. Las Cruces N. M.
Secretary.

L. S. Peters, M. D. Pres. Silver, City N. M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

Edgar A. Hines, M. D., Sec., Seneca, S. C.
W. M. Weston, M. D., Pres.,
Columbia, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Memphis, Tenn.,
April 7-9, 1914.

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